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SPECIAL PATHOLOGY

AND

DIAGNOSTICS,

WITH

THERAPEUTIC HINTS.

BY

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As a token of
most grateful acknowledgement of
your uniform friendship, so long en-
joyed by me, - and of my appreci-
tion of your high attainments in
science, and vast experience in prac-
tice, I would dedicate to you
this fruit of my humble labor.

Yours
ever grateful
Raue

Philadelphia, Decbr 3d
1867

CONTENTS.

Head.

DISEASES OF THE BRAIN AND ITS MEMBRANES.

PAGE

I.—*Affections which are characterized by an abnormal quantity of Blood within the Brain.*

Anæmia, ... 1
Hyperæmia, ... 4

II.—*Affections which result in Dropsical Effusions.*

Hydrocephalus acutus, meningitis tuberculosa, . . . 7
Hydrocephalus chronicus, ... 9
Hydrocephalus congenitus, ... 10
Hydrocephalus senilis, ... 11

III.—*Inflammatory Affections of the Brain and its Membranes, without Effusion.*

Encephalitis, inflammation of the substance of the brain, . . 12
Meningitis cerebro-spinalis epidemica, spotted fever, . . 13

IV.—*Structural Changes within the Brain.*

Apoplexia sanguinea, ... 15
Encephalomalacia, softening of the brain, ... 18
Sclerosis, hardening of the brain, ... 18
Hypertrophy of the brain, ... 19
Atrophy of the brain, ... 20

V.—*Pseudo-Formations.*

Tubercles, ... 21
Tumors, ... 21
Aneurysms, ... 22
Animal parasites, ... 22

Cerebral Symptoms, which appear objective to our senses during the life of the Patient.

Delirium, ... 22
Drowsiness, sleepiness, sopor, coma, ... 23
Sleeplessness, insomnia, ... 23
Full of sleep and yet unable to sleep, ... 24

Starting, and screaming out, in sleep, ... 24
Spasms, convulsions, ... 24
Epilepsy, ... 24
Paralysis, ... 25
Abnormal motions with the head, ... 25
Constant reaching with the hand to the head, . . . 25
Beating with one arm and one leg of the same side constantly up and down, with paralysis of the other side, . . . 25
Ptosis, or paralysis of the eyelids, ... 25
Strabismus, or squinting, ... 25
Pupils contracted or enlarged, ... 25
Inner canthi injected, ... 25
Symptoms of the face, ... 26
Constant vomiting, ... 26
Irregular breathing, ... 26
The pulse, ... 26
Peculiar bright redness on the palms of the hands and points of the fingers, ... 26
Peculiar lifting the feet high—cock's gait, ... 26
Tottering, reeling, stumbling in walking, ... 26
Walking backwards involuntarily, ... 26

DISEASES OF THE CRANIUM AND ITS INTEGUMENTS.

Size of the Head.

A. Abnormal Largeness.

Dropsy of the scalp, ... 27
Hypertrophy of the skull, ... 28
Caput succedaneum, ... 28
Thrombus neonatorum, ... 28

B. Abnormal Smallness.

Idiots, ... 29

C. Affections of the Skull, without Enlargement.

The fontanelles, ... 29
The soft occiput or craniotabes, ... 29
Atrophy of the skull, ... 30

D. Diseases of the Integuments.

Erysipelas of the scalp, ... 30
Pityriasis capitis, dandruff, ... 33
Seborrhœa, ... 33
Eczema capitis, ... 34
Impetigo, ... 34
Favus, ... 35
Tinea decalvans, ... 35
Wen, ... 36
Cornua humana, ... 36
Telangiectasia, ... 36

E.—The hair.

Alopecia, ... 37
Baldness, ... 37
Cutting of the hair, ... 37
Gray and white hair. 37
Plica polonica, ... 37

Eyes.

Fœtal development of the eye, ... 38
Unnatural lustre of the eyes, ... 38
Brilliancy, ... 38
Glassy eyes, ... 38
Dull eyes, ... 38
Sunken eyes, ... 38

DISEASES OF THE EYES.

I.—*Inflammations. Idiopathic and specific or dyscratic.*

Blepharitis, ... 39
Dacryo-cystitis, ... 40
Anchilops, ... 40
Conjunctivitis, ... 41
Ophthalmia catarrhalis, ... 41
Ophthalmia neonatorum, ... 42
Ophthalmia scrofulosa, ... 42
Ophthalmia syphilitica, ... 44

II.—*Products resulting from Inflammation.*

Chalazion, ... 46
Tylosis, ... 46
Onyx, ... 46
Hypopyon, ... 46
Staphyloma corneæ, ... 47
Cataracta lentis et capsulæ, ... 47
Glaucoma, ... 48
Amaurosis, ... 48

III.—*Pseudo-Formations.*

Tumores cystici, ... 50
Pterygium, ... 50
Pannus, ... 50
Fungus oculi, ... 51
Scirrhus and cancer, ... 51

IV.—*Affections of the Motory Nerves of the Eye.*

Blepharo-spasmus, ... 52
Ophthalmo-spasmus, ... 52
Strabismus, ... 53
Blepharo-plegia, ... 54
Ophthalmo-plegia, ... 54

Ears.

Analogy between the ear and the eye, ... 54
General observations, ... 56

DISEASES OF THE EAR.

I.—*Inflammation*, ... 57
Erysipelas of the auricle, ... 59
Intertrigo auriculæ, ... 59
Furuncles, ... 59
Otitis interna, ... 59

II.—*Products resulting from Inflammation.*
Otorrhœa, ... 60
Ulceration, thickening and destruction of the membrana tympani, . 61
Destruction and discharge of the ossicula auditus, . . . 62
Stoppage or stricture of the Eustachian tube, . . . 62

III.—*Pseudo-Formations.*
Polypus auris, ... 62

IV.—*Impaired Hearing, Deafness*, ... 63

Nose.

General observations, ... 64

A. Diseased Conditions of the external Nose.
Comedones, ... 66
Acne punctata, ... 66
Acne rosacea, ... 66
Warts, ... 67
Lupus, ... 67

B. Diseases of the Nasal Cavity.
Catarrh, coryza, ... 68
Yearly cold, ... 69
Snuffles, ... 70
Ozæna, ... 70
Polypi, ... 70
Epistaxis, ... 70

Face.

General remarks, ... 72
Aspect of the face, ... 72
Expression of the face, ... 74
Color of the face, ... 74
Temperature of the face, ... 76

DISEASES OF THE FACE.

Erysipelas of the face, ... 76
Crusta lactea, ... 76
Hydroa, ... 77
Syphilitic eruptions, ... 78
Cancer of the lower lip, ... 78
The flat cancer of the face, ... 78
Spasmodic and paralytic affections of the face, . . . 79
Mimic spasm, ... 79
Trismus, ... 79
Chattering of teeth, ... 79
Grating of teeth, ... 79
Paralysis of the face, ... 79
Prosopalgia, neuralgia of the face, ... 80

Mouth.

1. *External Parts*, ... 81

2. *Interior Cavity of the Mouth*, ... 82

Gums.

Parulis, ... 83
Epulis, ... 83
Fistula of the teeth, ... 83

Teeth.

Their development, ... 84
Odontalgia, ... 84

Tongue.

General observations, ... 100
Color, ... 100
Humectation, ... 101
Temperature, ... 101
Covering or coating, ... 101
Form and size, ... 102
Consistency, ... 102
Cracks and fissures, ... 103
Paralysis, ... 103
Glossitis, ... 104
Cancer, ... 104

Salivary Glands and their Ducts.

Saliva, its quantity, ... 105
its color, ... 105
its chemical reaction, ... 105
Inflammation and induration, ... 106
Parotitis, ... 106
Ranula, ... 107

Tonsils.

Tonsilitis, ... 107
Ulceration, ... 108
Chronic enlargement, ... 108

Uvula and Soft Palate, ... 109

Fauces.

Angina faucium, ... 109
Angina granulosa s. follicularis, ... 109
Ulcers in the fauces, ... 110
Retro-pharyngeal abscess, ... 111

Mucous Membrane of the Mouth in General.

Thrush, ... 112
Aphthæ, ... 113
Diphtheria, ... 114
Scurvy, ... 123
Noma, ... 124

Neck.

General observations, ... 125
Struma, ... 126

Pharynx and Œsophagus.

Pharyngitis, œsophagitis; dysphagia inflammatoria, . . 127
Ulceration, suppuration, softening, widening, . . . 127
True stricture of the œsophagus, ... 128
Stricture from spasm, ... 128

Larynx and Trachea.

Auscultation of these organs, ... 129
Spasmus glottidis, ... 130
Laryngo-tracheitis, ... 131
Croup, ... 133
Œdema glottidis, ... 135

Thorax.

PHYSICAL EXAMINATION.

I.—*Inspection.*

Respiratory motion, ... 137
Form of thorax, ... 138

II.—*Palpation.*

Temperature, ... 140
Form, ... 140
Resistance, ... 140
Motion, ... 140

III.—*Percussion.*

General observations, ... 143
What does it reveal? 143
Tympanitic sound, ... 144
Non-tympanitic sound; resonant sound of the lungs, . . 146
Metallic ringing percussion sound, ... 147
Cracked-pot sound, ... 147

IV.—*Auscultation.*

Modes of auscultation, ... 147
Normal sounds of respiration, ... 148
Inspiration, ... 148
Expiration, ... 150
Pathological deviations from the normal vesicular respiration, . 150
Inspiratory murmur, ... 150
Expiratory murmur, ... 151
Bronchial respiration, ... 151
Rhonchi, or rattling noises in the respiratory organs, . . 152
Dry rhonchi, ... 152
Rhonchi sibilantes, ... 153
Moist rhonchi, ... 153
Rhonchus crepitans, ... 153
Subcrepitant rattle, ... 154
Mucous rattle, ... 154
Metallic tinkling, ... 155
Click sound, ... 155
Friction sound, ... 156

Auscultation of Voice.

The voice, as heard in a normal condition of the respiratory organs, . 156
Laryngophony, ... 156
Tracheophony, ... 156
Bronchophony, ... 156
The voice as heard in abnormal conditions of the respiratory organs, 157
Decreased intensity or suspension of it altogether, . . . 158
Increase of intensity and clearness of articulation, . . . 158
Pectoriloquy 158
Bronchophony, ... 158
Entire change of character, ... 159
Ægophony, ... 159
Cavernous voice, ... 160
Emphoric echo and metallic tinkling, ... 160

Auscultation of Cough, ... 160

SPECIAL DISEASES OF THE RESPIRATORY ORGANS.

A. Affections of the Bronchial Tubes.

Bronchitis, ... 161
Bronchiectasia, ... 161
Influenza, ... 162
Pneumonia notha, ... 162
Catarrh in the chest of infants, ... 162
Tussis convulsiva, hooping cough, ... 165
Asthma bronchiale nervosum seu convulsivum, . . . 167
Asthma humidum, ... 168

B. Affections of the Pulmonary Parenchyma.

Pneumonia, ... 173
Tuberculosis pulmonum, ... 178
Acute miliary tuberculosis, or granular phthisis, . . . 184
Emphysema pulmonum, ... 186
Œdema pulmonum, hydrops pulmonum, ... 189
Gangræna pulmonum, ... 190
Hæmoptoë, hæmoptysis, ... 191

C. Affections of the Pleura.

Pleuritis, pleurisy, ... 193
Pneumothorax, ... 199
Hydrothorax, ... 200
Hæmothorax, ... 203

The Heart.

Auscultation.

First step: to know how the heart works, ... 203
Second step: how to find the exact situation of the different valves in the living subject, ... 205
Third step: of the different morbid sounds or murmurs of the heart, 207
1. The left ventricle during its systole, ... 207
2. The left ventricle during its diastole, ... 208
3. The left ventricle during its systole and diastole, . . 209
Morbid sounds, resembling murmurs, without any disease of the valves, 210
Anæmic murmur, ... 210
Venous murmur, ... 211
Pericardial murmur, ... 211

SPECIAL DISEASES OF THE HEART.

I.—*Diseases of the Pericardium.*

Pericarditis, ... 212
Hydropericardium, ... 215

II.—*Diseases of the Endocardium and Valves.*

Endocarditis, ... 216
Insufficiency of the mitral valves, ... 218
Constriction of the left auriculo-ventricular opening, . . . 219
Defective aortic valves, ... 220
Constriction of the aortic opening, ... 220
Defective tricuspid valves, ... 221

III.—*Diseases of the Heart-muscle.*

Myocarditis, carditis, ... 222
Hypertrophy and dilatation of the heart, ... 223
Fatty degeneration of the heart, ... 224

IV.—*Nervous Affections of the Heart.*

Palpitation of the heart, ... 225
Angina pectoris, ... 226

V.—*Diseases of the Aorta.*

Aneurism, ... 227

Diaphragm.

Diaphragmitis, ... 228
Singultus, hiccough, ... 229
Rupture and perforation of the diaphragm, ... 229

Abdomen.

Inspection.

1. Appearance in regard to size, ... 229
2. Appearance in regard to motion, ... 230
3. Appearance in regard to the elasticity of its external walls, . 231
4. Appearance in regard to the development of its subcutaneous veins, 231
5. Appearance in regard to changes of color, ... 231

Palpation.

Seat of the affection, ... 232
Nature of the swollen parts in the abdomen, ... 232

Percussion, ... 232

Auscultation, ... 233

SPECIAL DISEASES.

Diseases of the Stomach.

Dyspepsia, indigestion, ... 233
Vomiting, ... 234
Acute catarrh of the stomach, gastritis, ... 236
Chronic catarrh of the stomach, ... 239

Gastritis toxica seu caustica, ... 240
Gastralgia, cardialgia, ... 241
Ulcus ventriculi perforans, (rotundum chronicum,) . . . 244
Carcinoma, or scirrhus ventriculi, ... 247
Hæmatemesis, ... 252
Gastromalacia, ... 255

Diseases of the Intestinal Canal.

Catarrhus intestinalis, enteritis catarrhalis, ... 256
Chronic intestinal catarrh, ... 259
Typhlitis, perityphlitis, and inflammation of the vermiform process, . 262
Proctitis, ... 265
Periproctitis, ... 266
Dysentery, ... 267
Cholera, ... 273
Cholera morbus, ... 278
Cholera infantum, ... 280
Intestinal obstruction, ... 281
Constipation, ... 283
Hemorrhagia intestinalis, melæna, ... 286
Hemorrhoides, ... 287
Flatulency, bloatedness, meteorism, ... 293
Colica enteralgia, ... 295
Tuberculosis intestinalis, ... 302
Cancer of the intestines, ... 303
Cancer of the rectum, ... 303
Intestinal worms, entozoës, helminthes, ... 304

Diseases of the Peritoneum.

1. Peritonitis, ... 310
2. Ascites, dropsy of the peritoneum, ... 314
3. Tympanites abdominalis, ... 317

Diseases of the Liver.

Physical examination, ... 318

I.—*Diseases of the Hepatic Parenchyma.*

Hyperæmia, or congestion of the liver, ... 318
Nutmeg liver, ... 320
Hepatitis, inflammation of the liver, ... 321
a. Perihepatitis, ... 321
b. Hepatitis parenchymatosa seu suppurativa, . . . 321
Cirrhosis, hobnail-liver, interstitial inflammation of the liver, granulated liver, ... 324
Syphilitic inflammation of the liver, ... 326
Acute yellow atrophy of the liver, ... 327
Fatty liver, hepar adiposum, ... 328
Colloid liver, speck liver, waxy liver, albuminous degeneration of the liver, scrofulous liver, ... 329

Carcinoma hepatis, cancer of the liver, ... 330
1. Carcinoma fasciculatum, ... 330
2. Alveolar cancer, ... 330
3. Medullary or encephaloid cancer, ... 330
Hydatids of the liver, echinococcus cysts, ... 332

II.—*Diseases of the Biliary Ducts.*

Catarrhal inflammation of the mucous lining of the gall-ducts, . 334
Colelithiasis, formation of gall-stones, ... 334

III.—*Diseases of the Portal Vein.*

Pylephlebitis, inflammation of the portal veins, coagulum in the portal vein, ... 336
Icterus, jaundice, ... 337
Icterus neonatorum, ... 340

Diseases of the Spleen.

Physical examination, ... 344
Anatomical peculiarities of the spleen, ... 345
Hemorrhagic infarct and splenitis, lienitis or inflammation of the spleen, ... 346
Acute tumor, or hyperæmia of the spleen, ... 348
Chronic tumor, or hypertrophy of the spleen, ... 348
Sago-spleen, ... 349
Cancer of the spleen, ... 349
Echinococcus cysts, ... 350
Rupture of the spleen, ... 350

Diseases of the Pancreas.

Preliminary observations, ... 350
Pancreatitis, inflammation of the pancreas, ... 351
Hypertrophy of the pancreas, ... 352
Cancer of the pancreas, ... 352

Diseases of the Kidneys.

Examination of urine, ... 352
Diabetes, ... 356
Hæmaturia, passing blood with the urine, ... 357
Acute Bright's disease, or croupous nephritis, . . . 360
Parenchymatous nephritis, albuminuria, chronic Bright's disease, . 362
Nephritis vera, suppurativa, or interstitial inflammation of the kidneys, ... 364
Nephralgia, colica renalis, ... 365
Pyelitis, catarrhal inflammation of the renal pelvis, . . . 366
Perinephritis, inflammation of the renal capsule, ... 367

Diseases of the Bladder.

Cystitis, inflammation of the bladder, ... 368
Cystitis serosa, ... 372
Cystitis parenchymatosa, ... 372

Pericystitis, ... 372
Calculi vesicæ, stones in the bladder, ... 372
Micturition, or the voiding of urine, ... 375

Organs of Generation.

A. Male Genitals.

Venereal Diseases.

Gonorrhœa, ... 377
Complications and sequelæ, ... 382
1. Orchitis, ... 382
2. Prostatitis gonorrhoica, or inflammation of the prostata, . 382
3. Gonorrhœa vesicæ, ... 382
4. Buboes, ... 382
5. Ophthalmia gonorrhoica, ... 382
6. Gonorrhœa of the rectum, ... 383
7. Strictures of the urethra, ... 383
8. Gonorrhœal rheumatism, ... 383
9. General contamination of the system in consequence of gonorrhœa, ... 383
Chancre, ... 384
Constitutional syphilis, ... 385
Condylomata, sycosis, figwarts, ... 389
Inguinal bubo, ... 390
Balanitis, gonorrhœa spuria, or præputialis, ... 392
Syphilitic skin-diseases, ... 393
Syphilitic affections of the mucous membranes, ... 394
Iritis syphilitica, ... 395
Syphilitic affections of the periosteum, of the bones and cartilages, . 395
Sarcocele syphilitica, ... 396
Syphilitic contractions of muscles and tendons, . . . 396
Gummata in the cellular tissue, ... 396
Syphilitic affections of inner organs, ... 396
Syphilis infantum congenita et hæreditaria, ... 396

Diseases of the Testes.

Hydrocele, ... 401
Orchitis, inflammation of the testicles, ... 402
Carcinoma testis, ... 403
Varicocele, cirsocele, ... 403

Diseases of the Prostata.

Prostatitis, inflammation of the prostate gland, . . . 404
Enlargement and tumors of the prostata, ... 405

Diseases of the Vesiculæ Seminales.

Spermatorrhœa, ... 407
Impotence, want of virile power, ... 408

B. Female Genital Organs.

Ovaries.

Oophoritis, inflammation of the ovaries, ... 409
Hydrops ovarii, ovarian dropsy, formation of cysts in the ovaries, . 412

Uterus.

Leucorrhœa, catarrh of the uterus, ... 415
Parenchymatous metritis, acute and chronic infarct of the womb, . 419
Hydrometra, hæmometra, partial or total closure of the womb, . 423
Displacements of the womb, ... 423
Uterine polypi, ... 428
Cancer of the womb, ... 428
Metrorrhagia, hemorrhage from the womb, ... 431

Menstrual Anomalies.

1. Menorrhagia, ... 435
2. Amenorrhœa, ... 437
3. Dysmenorrhœa, menstruatio difficilis, ... 440

Vagina.

Catarrh of the vagina, ... 444
Pruritus vulvæ, ... 444

Mammæ.

Mastitis, inflammation of the mammæ, ... 446
Scirrhus seu carcinoma mammæ, scirrhus, or cancer of the breast, . 448

Spine.

1. Anæmia, ... 450
2. Hyperæmia, ... 450
3. Apoplexy or extravasation of blood, ... 451
4. Hydrorrhachis acquisita, dropsy of the spine, . . . 452
5. Hydrorrhachis congenita, spina bifida, ... 453
6. Meningitis spinalis, ... 454
7. Myelitis, inflammation of the spinal marrow, . . . 456
8. Myelomalacia, softening of the spinal marrow, . . . 458
9. Sclerosis medullæ spinalis, or hardening of the spinal marrow, . 458
10. Hypertrophy of the spinal cord, ... 459
11. Atrophy of the spinal cord, tabes dorsalis, ... 459
12. Tuberculosis of the spinal marrow and its membranes, . . 460
13. Tumors of the spinal marrow and its membranes, . . 460
14. Animal parasites within the spinal cord, ... 460

Motory Apparatus.

Rheumatismus.

1. Rheumatismus articulorum acutus, acute rheumatism of the joints, 461
2. Rheumatismus articulorum chronicus, chronic rheumatism of the joints, 463

3. Arthritis deformans, or nodosa, or pauperum; deforming inflammation of the joints, ... 463
4. Rheumatismus muscularis, muscular rheumatism, . . 464
Gout, podagra, arthritis, ... 470
Rhachitis, rickets, ... 473
Osteomalacia, softening of the bones, ... 474
Osteitis, caries, necrosis, exostosis, ... 475
Tuberculosis of the joints, white swelling, ... 477
Coxarthrocace, coxalgia, hip-disease, ... 478
Gonarthrocace, tumor albus genu, white swelling of the knee, . 481
Podarthrocace, abscess of the ankle-joint, ... 483

Nerves.

I.—*Morbid Affections of the Sensory Nerves.*

1. Hyperæsthesia, increased sensibility, morbid sensitiveness, nervousness, ... 484
2. Neuralgia, ... 485
1. Cephalalgia, migræna, nervous sick headache, . . 487
2. Neuralgia of the trigeminus, neuralgia facialis, dolor faciei Fothergillii, tic douloureux, ... 491
3. Cervico-occipital neuralgia, ... 495
4. Cervico-brachial neuralgia, ... 495
5. Intercostal neuralgia, ... 495
6. Lumbo-abdominal neuralgia, ... 496
7. Mastodynia, neuralgia of the mammæ, ... 496
8. Neuralgia ischiadica, sciatica, ischias postica, malum Cotunnii, 496
9. Crural neuralgia, ischias antica, ... 499
3. Anæsthesia, ... 499
Anæsthesia of the trigeminus, ... 500

II.—*Morbid Affections of the Motory Nerves.*

1. Spasm, convulsion, cramp, hyperkinesis, ... 501
Spasmus facialis, mimic spasm of the face, ... 503
Mogigraphia, writing-spasm, ... 504
Chorea, St. Vitus' dance, ... 504
Trismus and tetanus, ... 508
Catalepsy, ... 511
Epilepsy, morbus sacer, ... 512
Eclampsia acuta, ... 518
1. Eclampsia gravidarum et parturientium, puerperal convulsions, 519
2. Eclampsia infantum, convulsions of children, . . 520
Tremor, trembling, ... 522
Paralysis agitans, ... 523
2. Paralysis, akinesis, ... 524

Blood.

1. Cyanosis, ... 530
2. Dissolution of the red blood-corpuscles, ... 531
3. Leukæmia, ... 532

4. Hydræmia, ... 532
5. Plethora, ... 532
6. Anæmia, oligæmia, ... 533
7. Chlorosis, ... 533
8. Cholæmia, ... 538
9. Uræmia, ... 538
10. Septicæmia, ... 538
11. Pyæmia, ... 539
12. Scurvy, ... 540
13. Purpura, morbus maculosus Werlhofii, ... 542
14. Hæmophilia, ... 543
15. Scrofulosis, ... 544

Fever.

Clinical thermometry, ... 547
Crisis and critical days, ... 549
Intermittent fever, fever and ague, ... 551
Pernicious intermittent, remittent and continuous malarial fevers, congestive fevers, ... 562
Yellow fever, ... 564
Typhus, ... 568
Typhus exanthematicus, petechial typhus, ... 569
Typhus abdominalis, ileo-typhus, typhoid fever, . . . 572

Exanthemata.

Measles, morbilli, ... 587
Scarlatina, scarlet fever, ... 592
Roseola febrilis, rubeola, ... 601
Variola, small-pox; variolois, varioloid, ... 601
Varicella, chicken-pox, ... 605

Skin.

I.—*Hypertrophy of the Skin.*

Moles, mother's marks, ... 607
Soft warts, ... 607
Callosities, ... 607
Corns or clavi, ... 607
Horns, or cornua cutanea, ... 607
Nævi spili, ... 607
Lentigines, liver-spots, ... 607
Ephelides, freckles, ... 607
Chloasmata uterina, ... 607
Ichthyosis, fish-skin, ... 607
Warts, verrucæ vulgares, ... 608
Figwarts, condylomata, ... 608
Polypi, molluscum, ... 608
Telangiectasia, ... 608

II.—*Atrophy of the Skin.*

Vitiligo, achroma, ... 608
Calvities, alopecia, ... 608
Gray and white hair, ... 608

III.—*Hyperæmia and Anæmia of the Skin*, ... 608
Congestion of the skin, ... 608

IV.—*Dermatitis, Inflammation of the Skin*, ... 609
1. Erythema, ... 609
Intertrigo, ... 609
"Wolf," 609
Decubitus, ... 609
Erythema papulatum s. tuberculosum, . . . 609
Erythema nodosum, ... 609
2. Herpes, ... 610
Herpes facialis, ... 610
Herpes phlyctænodes, ... 610
Herpes labialis, or hydroa febrilis, fever-blisters, . . 610
Herpes præputialis, ... 610
Herpes zoster, or zona, ... 611
Herpes circinnatus, ringworm, ... 611
Herpes Iris, ... 611
3. Urticaria, nettle-rash, ... 612
4. Eczema, vesicular eruption, ... 613
Tinea furfuracea, ... 613
Tinea amiantacea, ... 613
Dandruff, ... 613
Eczema impetiginosum, rubrum, ... 614
Porrigo larvalis, ... 614
Tinea faciei, ... 614
Crusta lactea, ... 614
Crusta serpiginosa, ... 614
Eczema marginatum, ... 614
Salt-rheum, ... 614
Pityriasis palmaris et plantaris, ... 614
5. Impetigo, pustular eruption, ... 615
Chronic impetigo, ... 616
Impetigo figurata, ... 616
Impetigo erysipelatodes, ... 616
6. Ecthyma, isolated, large pustules, ... 616
7. Pemphigus, pompholyx, isolated large bullæ, or blisters, . 617
Pemphigus foliaceus, ... 617
8. Rupia, rhypia, isolated blisters, which form thick crusts, . 618
9. Furunculus, boil, ... 618
10. Carbunculus, carbuncle, ... 619
11. Panaritium, paronychia, whitlow, run-around, felon, . . 620
12. Psoriasis, tetter, ... 622
Psoriasis guttata, ... 623
Psoriasis diffusa, ... 623
Psoriasis annulata, ringworms, ... 623

Psoriasis gyrata, ... 623
Psoriasis inveterata, ... 623
Psoriasis palmaris et plantaris, ... 623
13. Lichen, strophulus, ... 623
Prickly heat, ... 623
Lichen simplex, ... 623
Lichen agrius, ... 624
14. Prurigo, pruritus, ... 624
Prurigo mitis, ... 625
Prurigo formicans, ... 625
Prurigo pudendorum, ... 625
15. Scabies, itch, ... 625
Scabies papulosa, ... 626
Scabies vesiculosa, ... 626
Scabies pustulosa, ... 626

V.—*Anomalies in the Secretions of the Skin*, ... 628

Gaseous substances, ... 628
Watery substances, ... 628
Sudamina, or miliary rash, ... 628
Hyperidrosis, ... 628
Anidrosis, ... 629
Sebaceous substances, ... 629
Comedones, ... 629
Milium, ... 629
Atheromata, ... 629

INTRODUCTORY REMARKS.

When I was called upon to lecture on Special Pathology and Diagnostics, about four years ago, I looked around for a work which would furnish the essential points of these branches of medical education, together with Homœopathic Therapeutics, in a concise manner and up to the latest researches; but I looked in vain. I was obliged to prepare my own materials. The result of these labors seemed, in the estimation of my pupils and indulgent friends, worthy of a more permanent form and a wider diffusion than oral teaching affords.

In its preparation I have consulted the best recent as well as older works on the different subjects contained herein: Virchow, Rokitansky, Vogel, Griesinger, Hasse, Wintrich, Bamberger, Simon, Niemeyer, Bock, Bednar, Hübner, Küttner, Wagner, Skoda, Hebra, Wilson, Da Costa, Hughes, Barclay, Bryan, Hammond; Hahnemann, Hering, v. Bönninghausen, Rückert, Oehme, Hartmann, Jahr, v. Grauvogl Müller, Meyer, Bähr, Kafka, Ludlam, Hale, Wells, Dunham, and others; New York Homœopathic Transactions and various journals. I have made free use of all of them as far as they suited my purpose, but have not followed any one exclusively The arrangement, selection, and elaboration of the whole are my own. The composition, however, would have unavoidably contained many Germanisms had they not been expurgated. I am indebted to Dr. G. R. Starkey, formerly Professor of Surgery in the Homœopathic College of Pennsylvania, for his kind offices in correcting the manuscript so as to render it more agreeable to the English ear.

This book does not pretend to be a special Therapia, because, as v. Grauvogl already remarks: "*It is impossible to prepare a com-*

plete, special Therapia for any so-called disease; just as impossible as to describe all human beings of all times, because the conditions of getting sick change constantly in the course of time." What the genius epidemicus requires, for example, in an epidemic of hooping-cough at this season may not answer at all for a like epidemic of next year. Hence, my intention has been to give only *therapeutic* HINTS. These hints I have carefully selected out of the rich treasury of our Homœopathic literature, and I have added the results of my own experience. But all this does not make it perfect. Many a colleague, on opening the book and glancing over this or that chapter, will miss one or another remedy which *he* has been applying successfully in a certain form of disease. It lies in the nature of such a work that this must be so. On being informed, however, of such remedies and their characteristic indications, the author would be happy to receive and apply them.

This book does not give any prescriptions in regard to the *dose*, because that is still an open question, and must be left entirely to the free judgment of the practitioner. My hints are collected from all sorts of observations, with low, middle, high, and highest potencies. I, myself, prefer the higher potencies; and it is possible that the more accurately we individualize the more we may become inclined to choose the highest. Others may think differently. So much is certain, that there are undoubted facts which seem to favor both sides of the question. Cases are recorded in which low potencies were given in vain, and a higher one of the same remedy at once effected a cure, and *vice versa*. Judge then for thyself.

THE AUTHOR.

HEAD.

SECTION I.

DISEASES OF THE BRAIN AND ITS MEMBRANES.

ENCASED as the brain and its membranes are in a bony box, their morbid alterations do not lie open for inspection, until after death; when, of course, a knowledge of them *matters* little, at least from a therapeutic point of view.

Drs. Fisher and Whitney have tried to clear up this dark field by auscultation; but nothing of practical value has resulted from their efforts. Thus we are obliged, if we want to come to any conclusion about the abnormal states of the brain, to look after those more remote symptoms, which appear outside of that closed box, as effects of the morbid action within. We shall find, in the course of our studies, that this will not always lead to an unmistakable diagnosis of brain diseases.

GROUP I.

AFFECTIONS WHICH ARE CHARACTERIZED BY AN ABNORMAL QUANTITY OF BLOOD WITHIN THE BRAIN.

Anæmia.

A deficiency in the proper quantity of blood in the brain in general, or of arterial blood in particular. Inspection shows the grayish substance to be paler, or nearly white; and the white substance, milk-white, glistening. On cutting into it, very few, if any, dots of blood appear, as is the case in the normal brain. The blood-vessels of the membranes are empty; and, in some cases, an increased quantity of serum has been found between the subarachnoid spaces.

As CAUSES, may be mentioned:

1. *All influences, which bring on general anæmia:* blood-letting, hemorrhages, loss of vital fluids by exhausting diarrhœas, especially *summer complaint;* long-continued fevers, hepatization of the lungs in weakly persons from the constant wasting away of blood and muscles; and starvation, which cuts off all recuperation of the lost vital fluid.

2. *Congestion or fluxion of blood to other organs.* So may Junod's cupping-boot, an instrument which has been invented in imitation of the cupping-glass, to be applied to a whole limb, in order to cause an artificial afflux of blood into it, when used incautiously, cause anæmia in the brain, and for the same reason do we find persons of weakened activity of the heart faint more easily in a standing than in a lying position, because then the propelling force is not sufficient to overcome the natural gravity of the blood towards the lower extremities.

3. *Compression or obstruction of the carotid or vertebral arteries*—by artificial ligation, tumors or emboli, which prevent the normal afflux of blood to the brain.

4. *Spasmodic contractions of these vessels,* as is evident in emotions of the mind, from which not only paleness of the face, but also swooning and unconsciousness, may result; *nervous apoplexy* of some writers?

5. *Exudations, extravasations, tumors, depressions of the skull,* whereby the internal capacity of the skull becoming diminished, the necessary supply of blood to the brain is impossible.

Anæmia, when it consists in a deficiency of *arterial* blood in the brain, is caused by

6. *All those states of the system which prevent the normal oxygenization of the blood,* as different heart and lung diseases.

Anæmia may develop itself suddenly, or gradually. When it comes on *suddenly,* we observe sudden loss of consciousness, dilated pupils, slow breathing; and also paralytic symptoms which are generally preceded by slight convulsions.

In its *gradual* development we observe likewise convulsive motions and paralytic conditions; also headache, sensitiveness to light and noise, flickering before the eyes, noise in the ears, vertigo, growing dark before the eyes, and loss of consciousness. Metrorrhagia frequently shows, very completely, this complex of symptoms.

Other cases are characterized by sleeplessness, great excitability, delirium, and even rage. This condition is mostly observed in such cases as are caused by starvation, and in persons whose general state

of anæmia is excessively aggravated by exhausting diseases or loss of blood.

The *anæmia* consequent upon *summer-complaint* was first and well described by Marshall Hall, who appropriately named it *hydrocephaloid,* on account of the great similarity of its symptoms to those of hydrocephalus acutus, and by him was divided into two stages—the *irritable* and the *torpid.*

In the first the children are restless; throwing themselves about in bed; starting frequently in sleep, and giving piercing shrieks; they grate their teeth; their face looks red; the pulse is frequent, and the skin hot; and spasms even may occur; thus making the whole resemble very much an acute attack of hydrocephalus.

In the second stage, however, the children collapse, become apathetic; do not look at objects held before their eyes; their eyelids are half closed; pupils do not react against the light; their respiration becomes irregular; pulse very frequent and small; they gradually grow cold all over, first in the face; and, in fatal cases, they die with symptoms of coma.

Therapeutic Hints.—In the first place, where the patient suffers with general anæmia, we ought to provide for him a diet which will best supply the lost vital fluids. Especially in summer-complaint, wine and mutton-chops often do more than medicine.

In the second place, where the heart's impulse has become weakened, we ought to take care that the patient should lie quiet in a horizontal position, not to allow him to leave the bed too soon, or even to rise for the purpose of using the chamber.

The special treatment must be dictated by the conditions of each case; success is possible only when we take each case as a "unicum," and search for its corresponding remedy in the Materia Medica.

In general, however, the following remedies may be mentioned as the most important in anæmic states after *loss of vital fluids:* Calc. c., Carb. v., China, Kali c., Merc., Nux v., Phos., Phos. ac., Puls., Sepia, Silic., Staph., Sulph.

Dizziness, vertigo, better in a horizontal position, after eating; worse in the morning, and in the open air; complaint of old people: Ambra, Baryta c., Fluor. ac., Graph., Lyc., Phos., Silic.

Delirium in consequence of great loss of blood: Arn., Arsen., Ign., Lach., Lyc., Phos., Phos. ac., Scill., Sepia, Sulph., Ver.

Convulsions in consequence of loss of blood: Ars., Bell., Calc. c., Cina, Con., Ign., Lyc., Nux v., Puls., Sulph., Ver.

Hyperæmia

Of the brain is that state in which it is overcharged with blood, either by *active congestion, rush of blood,* or *fluxion to the brain,* or *by stagnation* of blood in the brain, *passive hyperæmia.*

Post-mortem examination reveals most generally an overflow of blood through the whole organ. All the vessels and sinuses are overfilled with blood; the gray substance appears darker and of a brownish red, but the white substance, in exceptional cases only, presents a reddish hue.

In chronic cases the blood-vessels are almost always dilated; the substance of the brain is atrophied, and the subarachnoid spaces are filled with large quantities of fluid.

In some cases, however, *post-mortem* examinations do not reveal any such objective signs. On the contrary, the brain appears entirely empty of blood, although during life every symptom pointed to hyperæmia. This fact has not yet been fully explained; which shows that appearances in the dead body do not always clearly reveal what had been going on in it while living.

CONGESTION takes place—

1. *In consequence of an undue activity of the serous membranes,* which, enveloping the brain, act like a suction-pump within the skull. This seems to be the condition of those persons who are subject to "rush of blood to the head."

2. *In consequence of obstructions to the flow of blood to other and different portions of the body; whereby it is diverted with increased force towards the brain.* We see examples of this condition in compression of the aorta abdominalis by tumors, effusions, or enlarged abdominal viscera; in the contraction of the capillaries of the skin during the chilly stage of intermittent fever; and in the suppression of menstrual and hemorrhoidal discharges.

3. *In consequence of dilatation of the capillaries within the brain;* generally the result of the abuse of opium and alcoholic drinks.

STAGNATION of blood in the brain is caused—

1. *By compression of the jugular veins,* either from strangulation; by goitre, glandular tumors in the neck, or by aneurism of the aorta pressing upon the vena cava descendens;

2. *By violent expiratory movements,* as take place during violent fits of coughing, straining, and the blowing of instruments;

3. *By diseases of the valves of the heart;* and

4. *By some lung diseases*, as emphysema, cirrhosis, and long-continued pleuritic exudations.

The symptoms of hyperæmia are best arranged under two heads, in accordance with its two stages: that of *excitability* and *depression*.

To the first belong headache, sensitiveness to light, noise and touch; flickering before the eyes; singing and ringing in the ears; pain and formications in the flesh; restlessness; jerking and automatic motions of the limbs; grating of the teeth; convulsions; dizziness; hallucinations; sleeplessness and vivid dreams.

To the second, the stage of depression, belong insensibility to light, noise or pressure. In this stage also the limbs go to sleep, lose their mobility, and feel heavy as lead; the pupils become dilated; the pulse frequent, and the respiration quite slow, irregular, or snoring; and there is frequent vomiting.

Any of these symptoms may be absent in individual cases, and other symptoms may also be present in exceptional cases; and the *tout-ensemble* resembles very closely that of the exactly opposite condition—anæmia. How then shall we discriminate between these opposite states? By carefully weighing their causes.

Therapeutic Hints.—Rush of blood to the head indicates—

Aconite, when the patient is very restless and beside himself; crying, and full of anxiety and fear of death.

Aurum, when he complains of heat, roaring noise in the head, fiery sparks before the eyes, worse after mental exertion, fearful and longing for death.

Belladonna, when there are hot and red face, sparkling eyes, and dilated pupils; symptoms are aggravated by motion, leaning the head forward, or lying down.

Bryonia, when the patient feels as though his brain would burst through the forehead; with nosebleed; puffed, red face; great irritability and fits of anger.

Calcarea c., when the patient is worse in the morning, with puffiness of the face, after mental exertion.

China, when the slightest touch of the scalp is unbearable; when there is earthy color of the face. Worse from moving the eyes or shutting them.

Ferrum, when the face is hot and red, with swollen blood-vessels, accompanied by beating and humming in the head, and great sensitiveness of the scalp to touch.

Gelseminum, when, during dentition, children become drowsy, comatose and convulsive.

Hyoscyamus, when the patient becomes unconscious and delirious; with red, sparkling eyes, and bluish-red face.

Nux v., when the patient is worse in the morning, in the open air; after the use of coffee, liquors, or opium; with constipated bowels and suppression of hemorrhoidal discharges.

Phosphorus, when there is heat on the top of the head, dizziness, buzzing and throbbing in the head; swelling under the eyes; and palpitation of the heart from mental emotions.

Pulsatilla, when the face looks yellowish, and yet feels hot, with constant chilliness; worse in a warm room; better in the open air; no thirst; scanty menses.

Rhus tox., when there is a humming, formication and throbbing in the head; glistening redness of the face, and restlessness, which keeps the patient moving about.

Sanguinaria, when the temporal veins are distended.

Spongia, when there is a pressing, beating in the forehead; redness of face, with anxious features; better in a horizontal position.

Stramonium, when the patient becomes unconscious and senseless; when he exhibits loss of sight and hearing; his face is turgescent with blood; convulsive motions of the head; wild or stupid expression; and great thirst, with hydrophobia.

Sulphur, when there is flying heat in the face; diminished hearing; burning, throbbing and buzzing in the head; better in the room, worse in the open air; in hemorrhoidal complaints; and after the suppression of cutaneous eruptions.

Veratrum v., when there is a sense of fulness, weight, distention in the head; giddiness, intense headache, throbbing arteries, stupefaction; double, partial, luminous visions; nausea, vomiting; tingling, numbness in limbs; mental confusion, loss of memory, convulsions or paralysis; during dentition.

In consequence of suppressed or irregular menstrual discharge: Acon., Apis, Bell., Bry., Calc. c., Carb. an., Cham., Con., Dulc., Ferr., Graph., Lach., Lyc., Merc., Phos., Puls., Sepia, Silic., Sulph., Veratr.

In consequence of hemorrhoidal irregularities: Acon., Nux v., Puls., Sulph.

During a chill: Acon., Arn., Ars., Bell., Bry., Calc. c., Cham., Dig., Ferr., Hyosc., Ip., Lyc., Merc., Nitr., Rhus t., Sabad., Stram., Sulph., Veratr.

In consequence of alcoholic drinks: Acon., Ars., Calc. c., Lach., Nux v., Puls., Op.

GROUP II.

AFFECTIONS WHICH RESULT IN DROPSICAL EFFUSIONS.

This class comprises a number of affections which, according to their products. appearance and place, have been nicely distinguished from each other by post-mortem examinations, and accordingly classified. This classification, however, is of no practical use. I shall explain only the most important forms.

Hydrocephalus acutus, *Meningitis tuberculosa.*

This affection is an inflammation of the pia mater, which results in a serous-tubercular exudation, causing softening of the adjacent parts of the brain. It generally attacks that portion of the pia mater which lines the ventricles; in other cases the inflammation is principally seated on the base of the brain, when it is named *basilar meningitis.* Its victims are most frequently children between the ages of one and seven years, and they are attacked most frequently during dentition. They almost always exhibit a scrofulous or tubercular diathesis; although there are cases of acute hydrocephalus, in which no tubercular tendency could be discovered. Tuberculosis of the lungs and lymphatic glands have been most frequently observed, however, in cases of hydrocephalus; therefore this complaint is clearly based upon a general, constitutional disorder. Hence it sometimes springs up suddenly in consequence of having its latent disposition aroused by dentition, a cold, or a fall; causes which, in otherwise healthy children, would produce no such serious effects.

Hydrocephalus is likewise apt to follow hooping cough; acute eruptive diseases, especially measles; chronic eruptions of the head, especially if they dry up suddenly or if they are suppressed by external applications. Such conditions may at once localize the constitutional disorder in the brain, and develop the disease.

Its symptoms are various, and similar to those of many other diseases of the brain. Among the most characteristic may be named the following: at first there are the usual cerebral symptoms, as headache, sensitiveness to light and noise; grating of the teeth; starting in sleep; twitching and jerking of the muscles, &c., then *vomiting,* not after eating, but especially *on being raised up,* with *constipation of the bowels; the abdomen is hard and sunken in, scooped out, tray form; the pupils* are generally *contracted; the pulse is hard and quick.* After exudation

has taken place, we observe *a very peculiar piercing shriek*, which is repeated occasionally, and which, if heard once, is scarcely ever forgotten. The head is bent backwards into the cushions, and is rolled from side to side. In this stage of the disease convulsions frequently occur; and the children bring their hands frequently and automatically to their head; they become insensible to light and noise; the vomiting ceases; the pupils widen; the eyes squint; the pulse becomes quite slow, falling down to sixty and less in a minute; respiration is irregular, sometimes the breathing seems to cease altogether, followed by a deep, long, sighing inspiration. The face frequently changes color—now pale, and again red—and sometimes one side is pale and the other red. Or red spots appear on the face, coming and going. The blood-vessels of the eyes become injected, especially those of the inner canthi. The anterior fontanelle, when not closed, protrudes.

This condition of things may last nine or ten days, or even longer. When, however, the pulse rises again and becomes very frequent—when the skin is dripping with perspiration; when the abdomen, which had been sunken in, becomes bloated; when stool and urine pass off involuntarily; when the anterior fontanelle suddenly sinks in, and we hear the ominous rattling in the chest—then the scene will be closed within twelve or twenty four hours.

Basilar meningitis is especially characterized by a contraction of the nape of the neck.

Therapeutic Hints.

Aconite, in the very first stage of irritation.

Apis mell., convulsions; great fever heat; sopor, interrupted by piercing shrieks; bending back and rolling of the head; profuse sweat on the head, of a musk-like odor; inability to hold up the head; squinting; dilated pupils; grating of teeth; scanty but frequent emissions of a milky urine; trembling of the limbs; and irregular, slow pulse.

Artemisia v., convulsions of right and paralysis of left side; body cold all over; sopor, and yet drinking and swallowing water eagerly; face pale and oldish-looking; involuntary stools, greenish and thin.

Arnica, almost always after a fall.

Belladonna, redness and heat of the face; rolling and squinting of the eyes; throbbing of the carotid arteries; and involuntary discharge of urine.

Bryonia, uncertain, tottering gait; sudden change of disposition;

dizziness; sudden change of color in the face—as premonitory signs. Later: very dark-red face, "crimson red;" dry lips; dry brownish tongue; constipation; suppressed or painful urination, with much straining; hasty, impetuous drinking and swallowing; dry heat all over.

Calcarea c. and phosphorica, during teething; fontanelles wide open; rhachitic, scrofulous diathesis.

Cuprum, after catarrhal fevers, or exanthematic fevers; difficult dentition.

Helleborus, when exudation has taken place; automatic motions of one arm and one leg; frequent rubbing of the nose; squinting; pupils dilated; forehead drawn in folds and covered with cold perspiration; chewing motions with the mouth; greedily swallowing of cold water; great irritability, getting angry easily; face pale and puffed; soporous sleep, with screaming and starting; nostrils dirty and dry; lower jaw sinking down.

Opium, soporous condition with half-open eyes; snoring; iris insensible to light.

Sulphur, heaviness of the head, sinking involuntarily backwards; sweat on the head, with a kind of musk-like smell; frequent change of color in the face; sour smell from the mouth; after suppressed or dried-up eruptions on the head, behind the ears, or elsewhere.

Zincum, eyes sensitive to light; nose dry; gagging and vomiting, and yet a voracious appetite; scanty, turbid urine.

Argentum nitr., according to Grauvogl, in the *last stage.* He gives it in the sixth dilution every two hours, and at the same time **Calcarea phos.,** second trituration, night and morning.

Apocynum cannabinum, sutures opened; forehead projecting; sight of one eye totally lost, the other slightly sensible; stupor; constant involuntary motion of one leg and arm; urine suppressed. Compare with Helleborus.

Hydrocephalus Chronicus

develops itself, in grown persons, of acute attacks of different forms of meningitis; which may have been brought on by irritations of the brain from exposure to heat or cold; external injuries; the abuse of intoxicating drinks, or too great mental exertion. In children, even if it originates after birth, it is nevertheless identical with the affection called

Hydrocephalus Congenitus,

that form which children are born with. It is probably the consequence of an inflammatory process of the lining of the ventricles during fœtal life; perhaps it is a deficiency in the proper assimilation of calcareous substances which form the bones. Why it is we do not know in either case. Some women have given birth to hydrocephalitic children, several times in succession, without any apparent cause.

As the water collects in the ventricles whilst the sutures of the bones have not yet united, its constantly increasing bulk drives the bones asunder and enlarges the head to an enormous size. Or, if we take the other view, which is perhaps the more plausible of the two, we might explain it in this manner: The insufficiently-developed bones are not capable of restricting the growing brain within its proper limits; they give way here and there, and the brain gains entirely too much space within the skull. As, however, a vacuum can never exist, it is at once filled up with the general equalizing medium, *water* or *serum*. In this way the inner pressure becomes still stronger, and the still deficient bony structure becomes still less capable of restraining the increased internal pressure; it gives way again and again; and for the same reason the effusion of water must increase still more, until at length the whole cranium attains to an enormous size.

The disease can be recognized at once, although it may not have come to its full development. There is a disproportion between the size of the skull and that of the face; the fontanelles are much wider than usual, and the frontal opening may be traced down into the frontal bone; and laterally, down between the parietal and frontal bones. The bones themselves feel thin under pressure of the fingers; and externally the veins appear greatly enlarged, shining through the skin.

All these external changes appear only when the collection of water is very considerable. There have been found from six to ten lbs. of serum within the ventricles, which then appear enormously distended and thickened; whilst the substance of the brain in their neighborhood is wasting away. A small amount of serum does of course not change the external form of the cranium; neither is it changed should the effusion take place at a later period, after the sutures of the skull bones shall have closed; to this there are a very few recorded exceptions.

Children born with this complaint die frequently during birth or soon afterwards. Others show in the first weeks no signs of this malady; even during the whole of the first year it may be overlooked, until the *inability* of the child *to hold up its head* calls attention to it. But even then there may be no enlargement of the head visible; yet the child is slow in all its mental developments; it does not make any attempt to talk or walk; it remains uncleanly, and its actions look strange; when in joy or fear it makes antics and straggles with its extremities; frequently such children are thrown into convulsions.

The progress of the disease is either a steady one, going on from bad to worse, until at last general paralysis ends the scene; or it is interrupted by stationary states; or it remains for years seemingly unaltered. It is rare, however, for such patients to live beyond the age of puberty; a few only have been observed to live to the age of twenty.

Therapeutic Hints.—The most important remedies for this affection are: Ars., Calc. c. and phos., Helleborus, and Sulphur.

Hydrocephalus Senilis

Is that form of hydrocephalus which is found in old age, the second childhood of man. It seems to be developed from the following condition of things: The brain in old age is apt to shrink, which necessarily would cause an empty space within the skull. As no vacuum can exist, the would-be empty space is at once filled up with serum. The same takes place when, from some cause or other, only a portion of the brain becomes atrophied. The space which hereby is vacated is at once taken up by an exudation of fluid. Hence this sort of hydrocephalus is termed *hydrocephalus ex vacuo.* It sometimes happens that the exudation of serum takes place so suddenly and so profusely, that it causes all the symptoms of an *apoplectic stroke*, when it is called *apoplexia serosa.*

In most cases it is impossible to make a differential diagnosis between it and *apoplexia sanguinea;* neither have we any certain signs by which to diagnose *hydrocephalus senilis.*

GROUP III.

INFLAMMATORY AFFECTIONS OF THE BRAIN AND ITS MEMBRANES, WITHOUT EFFUSION.

As the brain is surrounded by three membranes—the dura mater, the arachnoidea, and the pia mater—post-mortem examinations have revealed inflammatory processes in each of them. An inflammation of the dura mater is called *pachymeningitis*, an inflammation of the arachnoidea is called *arachnitis*, whilst an inflammation of the pia mater is *meningitis proprie sic dicta*, *i. e.*, a properly so-called meningitis. Pachymeningitis and arachnitis are never primary affections, but always secondary to other inflammatory processes. They produce no characteristic symptoms, and they are therefore not capable of being diagnosed during life. The inflammation of the pia mater has been treated of under Group II.

Encephalitis, *Inflammation of the Substance of the Brain.*

This is a rare disease, and may be caused—

1. *By external injuries;* a blow or fall upon the head. In such a case the inflammation may start at first at the membranes, and spread from thence into the substance of the brain. Or the concussion may cause at once an extravasation of blood within the substance of the brain, and thus a subsequent inflammation. This seems to be the condition in those cases in which the cerebral symptoms develop themselves only when several weeks, sometimes five or six, have elapsed after the injury. In this class we must also reckon that inflammation of the brain which originates in consequence of apoplexy.

2. *By diseases of the skull,* especially by caries of the petrous portion of the temporal bones; the inflammation spreading by contiguity of tissues.

3. *By different infective diseases:* pyæmia, typhus, syphilis, glanders; for the intimate connections between which we have no plausible explanation.

4. *By some entirely unknown conditions;* as it would appear from cases in which the disease is developed from previous states of apparently perfect health.

Encephalitis never attacks the whole brain at once, but only a small, circumscribed portion of it. These places are swollen, which may be

known from the circumstance that the surface of the brain above appears even—not dipped in, as is usual; they are infiltrated and softened, and in consequence of extravasation speckled with red dots. If resolution take place, all well and good; if not, the inflammatory process continues on to the formation of an *abscess;* in which case the pus may be absorbed, or the suppurative process spread to the membranes of the brain, and cause a violent meningitis.

From the great variety in the nature of encephalitis, it can be easily understood that there must result, likewise, a great variety of its modes of utterance; and we need not wonder that, in certain cases, encephalitis is not recognizable at all by its symptoms, as there are indeed cases on record, in which during life no particular manifestations of cerebral disturbance existed; yet post-mortem examinations revealed large inflamed spots and abscesses in the substance of the brain. This obscurity depends entirely upon the peculiar locality and extent of the diseased spot. In other cases we are not able to distinguish it from meningitis, with which indeed it may be combined, either preceding or succeeding it. Thus encephalitis is sometimes, especially in chronic cases, involved in much obscurity; and again it may be complicated with meningitis or apoplexy.

Meningitis Cerebro-spinalis Epidemica, *Spotted Fever.*

This is an inflammation of the pia mater of the brain and spinal cord, resulting in an exudation of purulent matter. In the cerebrum, it is found chiefly at the base, about the pons, the optic nerves, and the medulla oblongata; in the spinal cord, chiefly about the dorsal and lumbar vertebræ. The brain is generally swollen or dry; sometimes there are small foci of softening.

It has been described under different names, as *brain fever, pernicious fever, ship and jail fevers, congestive fever, malignant typhus, exanthematic typhus*, and has been observed as an epidemy in Southern France in the year 1837, later in Italy, Spain, Ireland, Germany. In 1848, it was prevalent in Alabama, Missouri, and Arkansas; in 1850–51, in Massachusetts and the State of New York; and a few years ago in Pennsylvania and other States. It is usually epidemic, and chiefly confined to children and youth—more boys than girls, though not exclusively. Its causes we do not know. It seems, however, to occur more frequently in the latter part of winter and spring than in any other season of the year, and much oftener in warm, damp, wet seasons.

It is characterized by the following *symptoms:*

It frequently sets in suddenly, and commences with a chill, which is followed by fever; violent headache; restlessness; extraordinary prostration of strength; great aching in all the limbs, and sensitiveness to touch; quick, irregular pulse; stupor; convulsions; contraction of the nape, or one side of the neck, throwing the head backwards or sideways; convergence of the eyes; double vision, and flabbiness of the enlarged tongue. The name *spotted fever* was suggested by irregular, purplish, ecchymosed spots, from the size of a pin's head to larger patches, which appear upon various parts of the body. These spots do not grow white under pressure; they make their appearance generally on the second day of the disease; first on the upper eyelids, gradually extending over the whole body. Still, these spots do not appear in all cases.

Therapeutic Hints.—The disease has proved, so far, very fatal; and we need not wonder, as it attacks such vital organs with such violence.

Aconite, chill; fever; restlessness; dry skin; great thirst.

Argentum nitr., recommended by Grauvogl.

Arnica, sopor; soreness in all the limbs; ecchymosed spots.

Belladonna, violent headache; dilated pupils; double sight; delirium.

Bryonia, bursting headache; stiffness of neck; great pain in joints and limbs, not allowing motion.

Cimicifuga racemosa, intense pain in the head, as though a bolt were driven from the neck to the vertex with every throb of the heart; stiffness in the back; *tonic* and *clonic spasms;* intense pain in the eyeballs; tongue swollen.

Crotalus, pain in all the limbs; horrid headache; red face; delirium, with open eyes; ecchymosed spots everywhere.

Chininum sulph., great prostration; involuntary closing the eyelids from debility; violent, throbbing headache; heat in face; vertigo.

Gelseminum, great prostration; complete loss of muscular power, of vision and speech; pulse very feeble; respiration labored, feeble; nausea; vomiting.

Hyoscyamus, *double sight;* convulsions; delirium.

Lycopodium, sopor; sinking of the lower jaw; fan-like motion of nostrils; jerkings of the limbs and body.

Opium, stupor; spasms; drawing the body backwards and rolling it first to one side, then to the other; deep, slow breathing; very

quick or else very slow pulse; after violent mental emotions, fear, grief, fright, which act like a blow, stunning the whole nervous system.

Still other medicines have been administered, other medicines may have been beneficial. The accounts are not yet closed upon this subject.

GROUP IV.

STRUCTURAL CHANGES WITHIN THE BRAIN.

Apoplexia Sanguinea

Is a hemorrhage within the brain. In this disease, two conditions of the brain may obtain. In the first, blood oozes from the *capillaries;* in which case the substance of the brain appears dotted with numerous little bloody spots, diffusing themselves into the surrounding parts of the brain, which assume a reddish color; and, in case of breaking down of the tissue, form a reddish, soft mass, which is known under the name of *red softening of the brain.* In the second condition, the blood gushes out from some of *the smaller arteries*, and forms a large clot of blood in the brain. In this case there are sometimes smaller clots of extravasated blood in its immediate vicinity; but it is very rare that equally large clots appear in different parts of the brain *at the same time.* Such hemorrhages, however, frequently take place, one after the other, at shorter or longer intervals, which is in accordance with the popular notion, that a man will not live through a third stroke of apoplexy.

The principal cause of hemorrhage is *degeneration* of the *coatings of the arteries*, which may be either a *fatty degeneration* or the result of any inflammatory process, as in *endarteriitis deformans. Softening* and *atrophy of the brain* may also cause apoplexy. When such predisposition exists, the attack itself may be brought on by any exertion which increases the quantity of blood and consequent pressure within these degenerated vessels; thus, a rupture may be occasioned by hard spells of coughing; vomiting; laughing; straining when at stool, or in the act of parturition; and by mental excitement. A particular *habitus apoplecticus* does not exist. Observation proves that, not only those who have a short neck, broad shoulders, wide chest, large abdomen, and strong muscles (the so-

called plethoric habit) are liable to this affection, but also those of a meagre and slender shape. Apoplectic strokes generally occur after the fortieth year, as Hippocrates had already observed; and this for obvious reasons, when we consider its principal cause.

The attack is always sudden, if caused by the bursting of any considerable artery. The person, when attacked, falls suddenly to the ground, if he should be standing; he loses all consciousness; his face is deadly pale, but changes gradually into a purplish hue; the respiration is labored and snoring, and blowing during expiration; in such cases, congestion of blood towards the face soon takes place, whilst in those cases in which the respiration is not impaired, the face remains pale to the end. All voluntary motions cease; the limbs hang motionless; the skin is sometimes cool and pale, and sometimes dry and covered with sweat.

In cases of capillary extravasation, however, no such sudden attacks take place. It results in a mere partial paralysis. This condition may exist, therefore, during life, without our being able to diagnosticate it with certainty; as paralytic conditions may be the result of a number of other conditions.

The most frequent seat of hemorrhages is the *corpus striatum* and the *thalamus opticus*. The destruction of these parts, or of the pedunculi cerebri, always causes a paralysis of the opposite side of the body.

If the patient survives the first attack, he gradually returns to consciousness; but now symptoms of inflammation of the brain develop themselves, and necessarily, because there is an actual wound inside to be healed. The signs of this inflammation are: acceleration of pulse, fever, headache, delirium, jerking, and contortions of the paralyzed limbs. In those cases, in which the destruction by the hemorrhage is not too great, this stage of reaction causes the injured parts to cicatrize, or to absorb the effused blood, and, by means of fibrous exudations, form a cyst—*apoplectic cyst*—containing serum, which usually remains for life. We observe now, according to these remaining external lesions, one-sided paralysis, stammering, or total inability to talk. In light cases, where total absorption of the serum takes place, without destruction of substance, there is gradual recovery. In most cases, however, we observe a gradual decrease of mental capacity and activity, especially a loss of memory, which no doubt corresponds to that general atrophy of the brain which is necessarily consequent upon such a destructive process.

Therapeutic Hints.

Aconite, head hot; carotids throbbing; skin hot; pulse full and hard, but not intermittent; also after fright.

Arnica, head hot and rest of body cool; paralysis of left side; pulse intermittent, or irregular.

Baryta c., can't speak; childish; no clear sensorium; and in old age.

Belladonna, loss of consciousness; red face; dilated pupils; loss of sight, smell, and speech; spasms in the face; thick tongue; difficult deglutition; involuntary emission of urine; reaching with the hands to the genitals; moaning; paralysis of limbs right and left; coma, and sopor.

Cocculus, face red and hot; eyes closed, with the balls constantly rolling about; pupils dilated; breathing without noise; stupor; left or right extremities paralyzed.

Gelseminum, passive congestion; nervous exhaustion.

Hyoscyamus, sudden falling down, with a shriek; soporous condition; inability to swallow; involuntary discharge of feces; face red; numbness of the hands.

Lachesis, left side mostly affected; blowing expiration; cannot bear any thing to touch his neck; when conscious, talks and jumps abruptly from one idea to another; after the use of liquors or mental emotions.

Laurocerasus, palpitation of the heart; scarcely perceptible pulse; cold, moist skin; convulsions of the muscles of the face.

Nux v., unconsciousness; snoring; paralysis of lower jaw and (mostly) of the lower extremities, which are cold and without sensation.

Opium, coma; stertorous breathing; open eyes; dilated pupils; red face; sinking of lower jaw; slow, irregular breathing; slow pulse; jerking of muscles in the face; convulsive motions of the extremities, or tetanic stiffness of the whole body; hot sweat on the head; foam before the mouth.

Sepia, after previous attacks; in men, who have been addicted to drinking and sexual excesses, with a disposition to gout and hemorrhoids. Forerunners: dizziness in walking, with staggering; things fall out of their hands; forgetfulness; the use of wrong words when writing; cold feet; intermitting pulse.

Encephalomalacia, *Softening of the Brain.*

This is never a primary, but always a secondary affection; and its symptoms vary according as the cause varies. The causes are:

1. *Partial anæmia of the brain.* If any part of the system becomes deprived of its necessary supply of blood, it dies—mortifies. The brain forms no exception. If, by emboli, or by tying the carotid artery, the afflux of blood to one portion of the brain becomes obstructed, this portion changes into a *moist, soft, jelly-like substance,* which is generally of a whitish, grayish-white, or yellowish color, and is known in the books under the name of *necrotic* or *yellow softening of the brain.*

2. *Capillary hemorrhage within the brain.* It destroys the continuity of the substance of the brain. The extravasated blood mixes with the brain-substance, and makes it a reddish, soft, moist mass, which is known in books under the name of *hemorrhagic* or *red softening of the brain.*

3. *Hydrocephalitic effusions.* Their pressure causes an anæmic state of the neighboring portions of the brain, which appear quite white, and often so soft as to be nearly of the consistency of cream. This is called the *hydrocephalitic* or *white softening of the brain.*

A little reflection will convince one that the symptoms of this affection must vary altogether with the nature as well as the seat of the destruction. And there is, indeed, no characteristic complex of symptoms by which we are enabled to diagnosticate either the one or the other, or any form of this disease with any certainty at all.

Therapeutic Hints cannot be given, for the same reason.

Sclerosis, *Hardening of the Brain.*

This affection involves only small portions of the brain. It takes place, as we have seen, in consequence of inflammatory processes in the brain, by which cicatrices are formed. But indurations are likewise formed by an infiltration of fibrous elements within the substance of the brain, seemingly without any previous inflammation, the causes of which we do not know.

Such hardened places are formed more frequently in the white than in the gray substance; their number varies: sometimes only one is

found, at other times many. They are of an irregular shape, and vary in size from that of a lentil to that of an almond. When dissected, they present within a milk-white appearance, and in their centre blue or gray-reddish dots, which are the residues of destroyed capillary vessels.

The disease bevelops itself but slowly, and its symptoms are not at all characteristic. Paralysis, however, is its most frequent consequence; and as its morbid process is confined to small portions of the brain, so are also its paralytic consequences almost always at first confined to certain groups of muscles; to those of one extremity only, and always, at first, that of a lower extremity. The paralysis gradually, but quite irregularly, proceeds to other parts; paralyzing finally even the muscles of deglutition, respiration and circulation.

Therapeutic Hints, for obvious reasons, are absent.

Hypertrophy of the Brain

Means an overgrowth of the brain. However, we ought to know, that it is probably not the cerebral substance itself, which develops more largely, than naturally, but that this enlargement consists rather in an undue growth of that interstitial, fine tissue which binds the nervous elements together. It is confined mostly to the cerebrum.

This abnormal growth is either *congenital,* (and then is frequently combined with an imperfect growth of the body,) or it develops itself *after birth,* mostly during early childhood, rarely afterwards. In the latter case, we find it frequently associated with rhachitis and enlarged lymphatic glands. Its causes we do not know. Its external symptoms are: a considerable enlargement of the head, if it takes place *before* the sutures of the skull are perfectly closed; a condition entirely similar to that in the enlargement of the head in consequence of hydrocephalus. When it takes place *after* the closure of the sutures, such extension is impossible, but the skull bones grow thinner and their inner layer becomes roughened by absorption. In the first place it can be distinguished from hydrocephalus by this fact: that children having this affection are rather forward in their mental development, whilst in hydrocephalus the reverse always obtains. A hypertrophy *after* the closure of the sutures is never recognizable with certainty. One of its most frequent symptoms, however, is frequent attacks of fits, which resemble epilepsy.

Therapeutic Hints cannot be given *a priori.* Each individual case must be studied by itself. Compare Hyperæmia.

Atrophy of the Brain

Is the opposite of hypertrophy, a *shrinking, wasting away of the brain.*

DEFICIENCIES of growth have been found congenital, being confined either—1, to both hemispheres of the cerebrum; or, 2, to both hemispheres of the cerebellum; or, 3, there are certain parts of the brain not developed at all. In such cases the children are idiots. In some other cases the deficiency has been found confined—4, to one-half of the cerebrum and to the opposite half of the cerebellum, (the usual condition,) or to the corresponding half of the cerebellum; then the children are not idiots, but mostly affected with hemiplegia of the opposite side and in a great many cases with epileptic fits. We ought not, however, to consider the above as cases of atrophy of the brain, because they do not present a wasting away of what has been already developed, but a deficiency in the proper development itself; the causes of which we do not know.

Real atrophy is a shrinking—wasting away—of the cerebral substance. This occurs, occasionally, in old age, in consequence of marasmus senilis, where a want of general nutrition causes a waste of the brain; the lost substance being at once replaced by an exudation of serum, constituting hydrocephalus senilis. It also occurs as a result of exhausting diseases and chronic alcoholism; almost always leading to general paralysis and imbecility of mind.

But it may develop itself in portions of the brain only—*partial atrophy*—when in consequence of apoplexy, inflammation or exudation, as we have already seen, by destruction or pressure upon the capillaries or arteries, such portions become deprived of the necessary nutrition. Its consequences are, in almost all cases, aberrations of the intellect, imbecility of mind, and paralytic affections.

Therapeutic Hints.—A lost portion of the brain can be as little restored as a lost limb. Congenital deficiencies are therefore clearly out of the reach of any medicine. Where we suspect an atrophy in consequence of exhausting disease, we must select our remedies according to these circumstances. Destroyed portions will ever remain destroyed in spite of medicine.

GROUP V.

PSEUDO-FORMATIONS.

Post-mortem examination has revealed quite a variety of these morbid growths, and proves that they are not of infrequent occurrence. Their presence during life, however, is, like many other cerebral affections, scarcely ever recognizable.

Tubercles.

Tubercles are usually of a slow growth, when they develop singly. Miliary tubercles, however, in combination with meningitis or acute hydrocephalus, run an acute course. When single, they are found everywhere in the brain in various numbers. Their size varies from that of a hempseed to the size of a pea, or even to that of a hen's egg. Their form is roundish; their color yellowish, sometimes greenish; and their consistency that of cheese. In the course of further development they change, more or less, either by softening, into a yellowish matter, or, by assimilating calcareous matter, into a hard, mealy, chalky, or even a stony mass.

Most cases of brain tuberculosis have been observed in *children;* with grown persons this disease is rather exceptional, although cases have been observed after the age of forty or fifty, and even sixty years.

Tumors.

We find *cancerous*, *sarcomatous*, and *pearl-tumors*, (which latter have their name from the pearly lustre of their granulated surface,) *cysts*, and *bony tumors;* none of which can be diagnosticated during the life of the patient, unless they perforate the skull. In the event of perforation, they present the following signs: the integuments over the tumor are raised, but not broken, look red, and are interwoven with numerous enlarged blood-vessels, and destitute of hair. When the opening in the skull is large and not overlapped by the tumor, the edges of the bones may be felt around the circumference of the tumor. The tumor itself feels soft and uneven, and pressure upon it does not particularly hurt the patient. Sometimes a slight crepitation of small, loose, bony particles is felt, and sometimes a deceiving fluctuation. Pulsation is of rare occurrence in such tumors; and a rising

up and down of the swelling during respiration takes place only when the tumor is in immediate connection with the brain and does not adhere to the bones. In cases where the opening is large, and there is no adhesion of the tumor to the surrounding tissues, it may be pressed, wholly or partially, into the cavity of the skull. This, however, generally causes violent spasms, although there are cases in which the patient has experienced relief from this operation.

Therapeutic Hints.—Tumors, which perforate the skull, may indicate: Calc. c. or Calc. phosphorica, Ars., Carb. an., Bell., Lach., Phos., Silic., and many other remedies.

Aneurysms.

These are spherical or cylindrical enlargements of parts of an artery, and are mostly found at the base of the brain. Hasse does not know of any that have been found in the cerebellum. They vary in size, from that of a pea to the size of a hen's egg. They cause no characteristic signs by which they can be recognized.

Animal Parasites.

There are known two kinds: the *cysticercus cellulosa* and the *echinococcus hominis*. Both have the shape of a bladder, and are as large as a pea, and some as large as a hen's egg. The cysticercus has been found most frequently, whilst the echinococcus is much more common in the liver and kidneys. They produce no *characteristic* symptoms, and sometimes none at all; sometimes, however, they cause more or less frequent attacks of epilepsy.

It is altogether a remarkable fact, that in cases of tumors within the cavity of the skull, the brain does not seem to suffer from the pressure of such tumors, even if they are of a considerable size, provided they grow slowly; so that in some cases no symptoms, which in the least degree indicated any cerebral disorder, were observed during the life of the patient.

Cerebral Symptoms, which appear objective to our senses during the life of the patient.

Delirium, an aberration of mental action. It shows itself in the most various forms, from a still murmuring of single words, some-

times scarcely audible, to the most violent furibund utterances and actions; sometimes continually turning around one and the same idea, and at other times connecting and mixing the most different objects. Sometimes the patient seems sad or frightened, at other times jocose or audacious; in fact manifesting itself in the expression of all possible ideas and emotions of the mind.

It never denotes any *particular* form of brain disease; but it is a bad sign when it occurs in consumptive persons; in jaundice, during pregnancy, or parturition; after apoplexy or external injuries of the head.

Drowsiness, sleepiness, sopor, stupor, coma. Sleep is that state of the brain in which it recuperates its lost energies; and therefore it comes naturally after a well-finished day's work. According to Dr. W. A. Hammond, sleep is directly caused by the circulation of a less quantity of blood through the cerebral tissues than traverses them while we are awake. The condition of the brain, which is favorable to sleep, may also be induced by various other causes, such as *heat, cold, narcotics, anæsthetics, intoxicating liquors, loss of blood,* &c. If these agents are allowed to act excessively, or others, such as carbonic oxide, and all those which interfere with the oxygenation of the blood, are permitted to exert their influence, *sopor, stupor, coma,* results. Stupor and sleep are two entirely different conditions. "In the first place, stupor never occurs in the healthy individual, while sleep is a necessity of life; secondly, it is easy to awaken a person from sleep, while it is often impossible to arouse him from stupor; thirdly, in sleep the mind is active, in stupor it is as it were dead; and fourthly, pressure upon the brain, intense congestion of its vessels, the circulation of poisoned blood through its substance, cause stupor, but do not induce sleep. For the production of the latter a diminished supply of blood to the brain is necessary." Wm. A. Hammond, M.D., on Wakefulness, p. 18.

Sleeplessness, wakefulness, insomnia, may be induced by every cause capable of increasing the amount of blood ordinarily circulated through the brain. Such are:

1st. "Long-continued or excessive intellectual action, or any powerful emotion of the mind.

2d. "Those positions of the body which tend to impede the flow of blood from the brain, and at the same time do not obstruct its passage through the arteries.

3d. "An increased amount of blood is determined to the brain by certain substances used as food or medicine, such as alcohol, Opium, Belladonna, Stramonium, Indian hemp, tea and coffee, &c.

Cannab.

4th. "Functional derangement of certain organs of the body, whereby an increase in the amount of blood in the brain is produced; such as, exalted sensibility of the nervous system, nervous debility, disordered menstruation, deficient action of the heart, habitual cold feet, indigestion, &c." Hammond.

Though wakefulness may be the forerunner of serious cerebral disturbances, it is otherwise of no diagnostic value.

Full of sleep and yet unable to sleep is a symptom which most frequently denotes an irritation of the brain or its membranes; but any particular kind of disturbance it does not indicate. (Bell., Apis, Opium.)

Starting, and screaming out, in sleep are symptoms which frequently foretell spasms and meningeal inflammations, although they are sometimes mere symptoms of disorders of the digestive apparatus. From the "screaming out in sleep" we must distinguish *that shrill scream* which we meet with in meningitis, a peculiar shrill, piercing, short, agonizing sound, without tears, repeated every now and then. Once heard, it is not easily forgotten.

Spasms, convulsions. As spasms and convulsions may originate at the periphery as well as at the centre of the nervous system, all spasms do not indicate cerebral disturbances.

Spasms may consist of single jerks of single limbs or muscles, or they may be general, all over the body; in which case they are called convulsions. They may occur periodically in alternate contraction and relaxation of the flexors, and then are called *clonic spasms;* or, they may continue uninterruptedly for a longer time, and are then called *tonic spasms.* If they occur on one side only, accompanied by loss of consciousness, they generally originate in the brain, caused either by an internal injury of the head, or by inflammatory processes; apoplexy; exudation; formation of pus or tumors within the cavity of the skull. They appear mostly on the side which is affected, whilst the opposite side becomes paralyzed. If they attack the *muscles of the neck,* causing a contraction of the nape of the neck, with or without a rigid bending of the lower limbs backwards, it denotes a basilar meningitis.

Epilepsy is a peculiar form of spasms, which, according to the observation of a French physician, is said to have the following characteristic features: It commences with *a sudden deadly paleness of the face,* the patient gives at the same time a shriek, and falls down in spasms; this lasts from a quarter of a minute to a whole minute. After this the face becomes red and turgid, the patient is generally

convulsed and entirely insensible; this lasts one and a half to two minutes. After this the convulsions gradually cease, the stage of the decrease lasting from three to eight minutes, followed by a heavy sleep.

About its nature we know very little, and it is mentioned here merely as a symptom, which frequently accompanies *parasites* in the brain, and some *deficiencies* in its normal growth.

Paralysis. In apoplexy it comes on suddenly, but slowly in the case of tumors and softening of the brain; it generally befalls the side opposite to that in which the lesion of the brain exists. In meningeal affections and also in general atrophy, the paralysis is frequently of a general character.

Abnormal motions of the head consist either in a constant rolling of the head from side to side; a lifting up of the head from the pillow; or a bending of the head backwards and boring it into the cushions;—all of which denote irritation of the brain. The rolling and lifting up of the head is most generally observed in hydrocephalus, whilst the bending backwards of it is a sign of basilar meningitis.

The *constant reaching with the hand to the head* is caused by pain, either in the head or in the ears.

Another peculiar abnormal motion is *the beating with one arm and one leg of the same side up and down,* constantly, sometimes for days and nights; whilst the other side is paralyzed. It is almost always observed after exudation has taken place in acute hydrocephalus. Those changes which are produced externally by hydrocephalus, hypertrophy, and also some pseudo-formations, when they perforate the skull, have been already detailed under their respective heads.

Ptosis, or *paralysis of the eyelids,* sometimes follows apoplexy and other degenerations of the brain.

Strabismus, or *squinting,* is an effect of apoplexy and meningitis; but it is likewise occasioned by irritations within the intestines.

The *pupils* of the eyes are mostly *contracted* in the beginning of cerebral anæmia and meningitis; but they *grow larger* during the progress of the disease. Sometimes one pupil is large and the other small.

During the progress of an acute hydrocephalus, the *inner canthi* of the eyes become gradually *injected,* and there form a semi-transparent glutinous substance under the lids, which here and there covers the cornea; so that the eye looks as though it were broken. Whenever I have found such injected inner canthi, and at the same time that

glutinous substance floating upon the ball, I have never seen the patients recover.

The *face* indicates a deeply-seated illness, has a sunken appearance; sometimes flushing up and then growing pale again, sometimes only one side of it. In some cases these flushes form only circumscribed round red spots on the cheeks, coming and going continually. This latter I have always found to be a bad sign. All these symptoms belong to meningeal affections, whilst apoplexy, softening of the brain, or similar destructive processes, are almost always associated with paralysis of one side of the face and tongue; so that talking and eating becomes difficult or even impossible.

The *constant vomiting* without any apparent disorder of the stomach, worse when being raised up, and associated with constipation of the bowels, is a sign of meningitis.

The *breathing* in acute brain diseases is mostly *irregular* and *sighing*. There are one or two deep inspirations, and then follow one or two, which are scarcely perceptible. It appears as though the breathing ceased altogether for a while.

The *pulse* is mostly slower than natural about the time and afterwards when exudation takes place, but later it increases again to great frequency and smallness.

A peculiar bright redness on the palms of the hands and points of the fingers, spreading around to the dorsal portion of hands and fingers, is observed in some cases of meningitis after exudation has set in. It is a kind of suggillation of blood under the skin, and is a very bad sign. If it turns purple, death is near.

A peculiar lifting the feet high when walking, the so-called *cock's gait*, is said to be with children a characteristic sign of threatening hydrocephalus acutus, and in grown persons a symptom of some organic lesion of the brain.

Tottering, reeling, stumbling in walking, may be in children one of the premonitory signs of approaching acute hydrocephalus, or, after injuries upon the head, a sign of inflammation of the brain.

Walking backwards involuntarily has been observed in softening of the cerebellum.

These are the most prominent and constant signs by which internal disorders of the brain and its membranes manifest themselves exteriorly, and we may call them, with good right, *brain symptoms*. Their presence, especially, if they come in groups, will enable the physician to come to the conclusion that he has to deal with a cerebral affection; but further diagnostic distinction will be a matter of con-

lecture, except in those plain cases of hydrocephalus, meningitis, and apoplexy, where the symptoms are of a less dubious character, and therefore less susceptible of being falsely interpreted. In most brain diseases, however, it is impossible to diagnosticate with certainty, how and where the brain is affected. Thus all these cerebral symptoms have only a general diagnostic value.

SECTION II.

DISEASES OF THE CRANIUM AND ITS INTEGUMENTS.

If we look at the head as a whole, the first impression received from it is concerning its *size*. This varies very much, as is well known even from trying on hats in a hat store. A hat, that fitted a Webster, might fall down to the root of many a man's nose; whilst a little boy's cap would cut a figure upon the crown of any ordinary man's head. To define the *normal size* of the skull, therefore, might be a matter of great difficulty; unless we should allow a certain number of inches in circumference as a standard. And yet we can distinguish a head of an *abnormal size* at the first glance. It is not then the relative size of a head compared with others, but it is the disproportion which it bears to the face and the remainder of the body. And this disproportion strikes the eyes at once so unmistakably, that special measurement is not required at all. We call a head *abnormal in size*, if it is either *too large* or *too small* in proportion to the body.

A. Abnormal Largeness of the Head

May be caused, as we have seen, by *hydrocephalus; hypertrophy of the brain;* and by *pseudo-formations within the cavity of the skull, when they perforate the skull.* To this are to be added morbid conditions of a more external nature.

Dropsy of the Scalp.

This is a collection of serum either in the *cellular tissue* (cellular dropsy) or *between the aponeurosis and the pericranium* (aponeurotic dropsy). When the watery fluid collects in the *cellular tissue*, it is apt to spread down to the face; and on pressure with the finger it leaves a pit; as is seen on all parts of the body, where dropsical effu-

sions exist within its cellular tissue. When it is *below the aponeurosis* or the *galea capitis*, the swelling is tight, elastic, fluctuating, and leaves no pits on pressure, and never spreads over the ears or eyelids; and this for obvious reasons.

Both forms exist without cerebral symptoms, and may be the consequence of either a general dropsical condition, or of erysipelas, external injuries, stings of insects, eruptions, and so on.

Hypertrophy of the Skull.

This may either involve a *part* only of the cranium, in which case it forms *exostosis* or *bony protuberances*; or the *whole skull;* whereby the bony walls may attain a thickness of one inch and a half. Both forms cause an enlargement of the head, and are mostly found as a concomitant to rhachitis or syphilis.

Those bony protuberances which grow out from the inner plate of the skull have been already mentioned as pseudo-formations within the cavity of the skull; and, as they do not cause any external enlargement of it, they are not recognizable with any degree of certainty.

The Bruised Head of a Child after Birth,

Caused by the pressure during birth, is either *an extravasation of lymph or blood into the cellular tissue;* in which case it is called *caput succedaneum;* or it may be *an extravasation of blood between the bones and the pericranium,* causing the affection called *thrombus neonatorum.*

The *caput succedaneum* may extend over the fontanelles or sutures of the bones; it may even be formed on any part of the head sufficiently exposed to a great pressure of the pelvis, or the forceps, during labor. It has a soft, downy feel, and the outer skin looks bruised.

The *thrombus*, however, is confined generally to the parietal bones, and never extends over the sutures of the bones, because there the pericranium adheres firmly to the skull. It feels elastic and fluctuating, and shows no discoloration of the external skin.

Both forms are in their nature bruises, and ought to be treated, should treatment be necessary at all, like bruises. *Arnica* will almost always do all that is required; in some cases, however, Bar. mur. and Merc. have been successfully applied.

B. Abnormal Smallness

Of the head is found in idiots. It may be partial or general, congenital, or caused after birth, before ossification is completed. Always, however, it will be found in connection with an imperfect development or derangement of the brain.

C. Affections of the Skull without Enlargement.

The cranium consists of two tables, which run parallel with each other, and are separated by an intermediate cellular structure, which is called diploë. The whole, however, consists of eight different bones, which are connected to each other by sutures. Before these sutures consolidate, there are, of course, on those places where different bones are to meet, larger or smaller openings, which are called *fontanelles*. At the time of birth, however, as a general thing, only one of these fontanelles exist, and that is the *anterior opening*, whilst the *posterior* and *parietal* openings have already closed.

The *anterior fontanelle* closes normally in the second year of life. If it stays open much longer than two years, it shows a want of proper nutritive action in the system; if it *grows larger*, dividing the frontal bone and parting the parietal bones, it is a sign of chronic hydrocephalus, or of hypertrophy of the brain. If you lay your hand softly upon it, or watch it closely, you will observe a constant motion up and down, a kind of breathing of the brain. *Screaming* or *coughing* causes momentary distention and protrusion of the integument over it. If, however, as in cases of meningitis, this opening *swells out permanently*, it is a sign of *exudation* of water in the brain. Its *suddenly sinking in* denotes a *collapsus of the brain*, which is soon followed by death. In like manner, the *posterior fontanelle*, by a morbid process of absorption of the already formed bony substances, may reopen again; or there may form several holes near by,—the bony structure withering away gradually, leaving only the integuments. This is called the *soft occiput* or *craniotabes*. It has been observed mostly towards the end of the first year, especially in children of rhachitic or scrofulous parents. It is doubtless a deep-seated, constitutional disorder, and can be successfully treated only by a careful study of all the symptoms. Nevertheless, Sulphur, Calcarea c., Calc. phos., and Silicea might often be indicated. If not checked, it becomes frequently complicated with meningitis, or pneumonia, or tuberculosis, and diarrhœa, which soon end the scene.

To this I may add—

Atrophy of the Skull.

This may be a consequence of internal pressure from pseudo-formations within the cavity of the skull, which may even perforate the cranium; or from hypertrophy of the brain; all which have been already mentioned.

We also meet with *inflammation of the skull* or *ostitis*, with all its sequelæ—*caries* and *necrosis*—which is mostly of a syphilitic or tubercular origin, or is caused by external wounds badly treated.

Therapeutic Hints. — Caries calls for Asa f., Cal. c., Calc. phosph., Fluoric ac., Puls., Silic., Sulph., and perhaps other remedies.

D. Diseases of the Integumen'ts.

The integuments of the cranium consist of the following five different layers:

1. *The external skin* or *derma* is covered thickly with hair, and contains innumerable *sebaceous* and *sudoriparous* glands, of which the former secrete an oily, fatty substance, and the latter are the organs of perspiration.

2. *The subcutaneous cellular tissue*, in which lies imbedded the network of the larger blood-vessels and nerves, and which conjoins the derma to

3. The *aponeurosis;* which is expanded tightly over the cranium. Under it is found—

4. *The second cellular tissue,* which consists of loose mashes and connects the aponeurosis only loosely with

5. *The pericranium,* which is the immediate covering of the bones, and which, although very thin, is nevertheless of great strength. It transmits numerous blood-vessels into the bones.

In diseases of the scalp, all or single of these different layers may be affected.

Erysipelas of the Scalp.

Erysipelas is a dermatitis,—an inflammation of the skin,—and consists *in a highly hyperæmic state of the cutis; in a profuse infiltration of serum within the cutis and subcutaneous areolar tissue; and in a participation of the lymphatics in the inflammatory process.*

Sometimes it results in hemorrhage of the skin in consequence of ruptures of capillary blood-vessels; and in some cases even in a gangrenous destruction of the skin; but seldom in abscesses.

Its local symptoms are frequently preceded a day or two by a feeling of general malaise, chilliness and feverishness. Then the part affected begins to feel hot and tense; the skin reddens and swells, and becomes very sensitive to the touch. At the same time the adjacent lymphatic glands commence to swell. The inflamed portion assumes a red, smooth and shiny appearance; which is, however, darker and duller on the scalp than on other parts; and to the touch it gives the impression of a hard, stiff, caked mass. The inflammation seldom remains stationary, but gradually creeps on until it reaches from side to side of the scalp, down into the face, and even to the neck and shoulders.

On the second or third day, generally, the redness and swelling reach their height; and, at this stage, in some cases, the epidermis becomes raised and filled with a yellowish, limpid fluid in the shape of large blisters—*erysipelas bullosum*—which either dry up, or burst and become covered with crusts.

During the height of the disease, the patient has high fever, with evening aggravations; his sleep is restless and full of dreams; he sometimes even becomes delirious. On the fourth day the redness and swelling gradually subside on the places first attacked; whilst those parts which were invaded later stand yet in full bloom. By-and-by, however, they grow paler, softer, and assume a wrinkled appearance, as the swelling leaves; the crusts dry off, and on the whole surface the epidermis peals off in large flakes; the entire process lasting about eight days.

But this is not the invariable course. Just in its very nature to creep on, lies the danger. As it spreads along in the skin and subcutaneous cellular tissue, so it is apt to extend even to the membranes of the brain, causing there an erysipelatous meningitis. Then the external swelling and redness disappear; or the redness changes into a purple hue; the patient becomes unconscious and delirious, and his condition quite a precarious one.

Erysipelas attacks any part of the body, most frequently, however, the *scalp* and *face*, especially in its *idiopathic form;* when it comes on seemingly without causes in apparently healthy individuals,—just like pneumonia, pleurisy, laryngitis and the like. It even p evails at certain times epidemically; and it is apt to attack persons again and

again, thus differing entirely from other acute exanthematous diseases, like scarlet fever, measles, &c.

When it exists as a *secondary* affection, its causes are—

1. *Wounds*, even the slightest scratch, may bring it forth, if a discratic tendency exists in the body, and especially such wounds as favor a reabsorption of acrid and ichorous fluids.

2. *Infection.* This may be observed in hospitals. The irritating poison seems to adhere not only to bandages and other surgical appliances, but also seems to float in the air; from which it is absorbed by the lymphatic vessels when they are exposed to it.

Therapeutic Hints.

Belladonna, when on the *right side*, smooth and shining.

Rhus tox., when on the left side, spreading to the right, and forming blisters.

Apis mellifica, when it spreads down to the face, and swells under the eyes, forming reddish, watery bags there.

Graphites, when there is a tendency to repeated attacks of e. bullosum, a spreading from the nape of the neck to the face, and even perspiration does not relieve.

Lachesis, when the swelling assumes a purplish hue, and the patient begins to talk deliriously as soon as he shuts his eyes.

Phosphoric ac., when in consequence of wounds, by which the periosteum is affected.

Ruta, in combination of wounds.

Silicea, when the bones are injured.

Its spreading to the cerebral membranes suggests, Ars., Bell., Camph., Lach.

But success we can have in such cases only by close individualization, as the following case may show: A young man of about twenty years of age was attacked by a bullosum capitis. A year previously he had had a similar attack and got well. This time he applied a salve, and the erysipelas struck in. I found him entirely insensible and delirious; the external cuticle was peeling off, but left the skin livid and purple. After missing several times, I finally gathered the following symptoms: "*When touched ever so slightly on his feet, he jerks them up, much frightened; he talks of pigeons flying in the room, which he tries to catch with his hands; he gets regularly worse about three o'clock in the morning;*" and I gave him *Kali carb.*, one dose of Jenichens' high potencies about nine o'clock in the evening. When I called there next morning, his father related to me the following account:

"My son," said he, "was very restless through the night. As the clock struck three, all at once he stretched himself out, grew pale, and we all thought that he was dying. His brother ran to the neighbors, and knocked them out of sleep, to tell them that John was dying. By-and by the neighbors came in, and John still lay stretched out and motionless. In going nearer and examining whether his breath were gone, we found that he was breathing still; indeed, he was sleeping; and continued to sleep for more than two hours. This he had not done for a week or more." There was neither another remedy, nor a second dose of the same remedy required.

Pityriasis Capitis, *Dandruff*,

Is a chronic inflammation of the epidermis, which is characterized by the production of minute white scales in great abundance, or patches of irregular form and variable dimensions. It commences usually upon the temples and around the forehead, and thence extends to the rest of the scalp. Its first invasion is attended with some degree of redness, which gradually disappears, and leaves the integument whiter than its natural hue. Occasionally it extends to the eyebrows, the whiskers and the beard.

Seborrhœa.

We have all seen in little children those dirty heads, which appear to be heaped with layer upon layer of dirt. Cleanliness, of course, will not suffer such an accumulation of layer upon layer, but still, notwithstanding all cleanliness, it appears again and again. What is it? It is a superabundant secretion of that fatty and oily substance, which continually is formed in the *sebaceous glands*, and which is so necessary for sustaining the pliability and softness of the hair and skin. Oozing out in too large quantity, it collects upon the head, dries in the air, and forms those tough, hard, rosin-like and dirty-looking crusts. As they consist of a fatty, oily nature, they are best dissolved by the application of oil or grease; this, and washing with castile soap, keeps the head clean.

Eczema Capitis, *Humid Tetter or Scall,*

"A non-contagious affection, characterized by the eruption of minute vesicles in great numbers, and frequently confluent, upon a surface of irregular form and usually of considerable extent. The vesicles are so closely aggregated in some situations as to give rise to one continuous vesicle of great breadth." Wilson.

They dry and form thin scales, or else break and discharge a watery or milky fluid of different consistencies, which, by concreting, give rise to thinner or thicker crusts. It is acute and chronic in its nature, and may appear on any part of the body. According to its appearance, location, or severity and obstinacy, it has received a variety of names, which gives a nomenclature most remarkably confused and confounding. It is called *ekthema, porrigo, tinea* with various adjectives, and, if chronic, *psoriasis.* In order to simplify the whole, we will just remember, that *eczema* exhibits the following characteristics: *It is a vesicular eruption, in clusters, often confluent, discharging limpid or turbid and milky fluid, which forms crusts of different thickness, is acute or chronic, mild or severe, situated here or there.*

It may be confounded with

Impetigo,

Because its appearance resembles so closely this latter as to force upon the mind the impression of their being the same disease. And, indeed, *impetigo*, derived from *ab impetu*—a bursting forth with violence—is nothing but a *pustular eczema;* so that, in order to distinguish between the two, we must know what is a *vesicle*, or what is a *pustule.* By *vesicle* is understood a very small blister, containing a transparent, limpid fluid; a *pustule* means a pimple, containing pus. The difference between eczema and impetigo lies then in the *pyogenetic* (that is, pus-forming) character of the latter. If both are found together, covering large patches on the scalp, their distinction is quite difficult, unless we say: the hardened coverings of the excoriations of *eczema* are *thin scabs,* because growing out of a limpid, thin fluid—*lymph;* whilst those of *impetigo* are *tense and thick, greenish-yellow, or brownish crusts,* on account of their being formed out of *pus.*

Therapeutic Hints.

Calcarea, Lycopodium, when the eruption yields a thick and mild secretion.

Arsenicum, Natrum mur., Rhus t., when it looks angry, excoriated.

Baryta c., Graphites, Natrum mur., Rhus t., when it causes falling out of the hair.

Lycopodium, Psorinum, when it smells very badly and causes lice.

Natrum mur., when situated on the boundaries of the hair on the nape of the neck.

Clematis, Petroleum, when on the neck and occiput.

Hepar sulph., when the eruption itches worse in the morning, when rising, with burning and smarting after scratching—likewise after external application of salves.

Clematis, Graphites, Hepar sulph., Lycopodium, Natrum mur., Rhus t., Staphisagria, Thuya, when moist eruptions.

Arsenicum, Calcarea, Mercurius, Sepia, Silicea, Sulphur, when dry crusts.

Favus, *Honey-comb Ringworm*, Tinea favosa or Maligna,

Is a vegetable parasite. "It used to be classed among the pustular eruptions, because it first appears as a small yellow spot, the sheath of the hair being filled with the fungous growth; but it has no tendency to suppurate. It grows with great rapidity, and forms large, hard, dry crusts, which have a peculiar mouse-like odor. It is most liable to be confounded with impetigo, but it requires only moderate care to determine whether the crust be *hardened pus* or an *independent growth*. The distinction is based upon the presence or absence of secretion; be the crust of impetigo ever so dry, some trace of purulent secretion is sure to be met with; and if removed by a poultice, the moist, exuding surface cannot be mistaken. Knowing this fact, we have no need to particularize the rounded form, the cracked, broken-looking surface, and all the other characters resembling honey-comb; which the older writers were obliged to enumerate." (Barcley.) The scalp is its most usual place of development, but it is sometimes found upon the nape of the neck, or in front of the ear.

To this may be added—

Tinea, or Porrigo Decalvans.

The hair falls out in a patch of a circular form, leaving the skin of the head perfectly smooth. It is a microscopic fungus, that invests the roots of the hair and destroys them.

Cases are reported as having been cured by *Graph.*, *Phos.*

The Wen

Is an encysted tumor of varying size; from that of a small pea to the size of a walnut, and even a small orange.

"The sebaceous or fatty substance in these sacs or cysts is variously altered in its qualities and appearance. Sometimes it is a lympid fluid like serum, and contains crystals of *stearine;* at other times it is soft and white, of a pappy consistency; again, it is yellowish, and resembles beeswax. Sometimes it contains epidermal scales and hairs. Sometimes the contents of the cyst are exceedingly fetid; and the fetor is increased when the tumor inflames." Wilson. Under the pressure of the finger they feel elastic, and are movable under the skin.

Therapeutic Hints.—Thus far have been successfully applied: Baryt. c., Bell., Calc. c., Caust., Clematis, Phytolacca, Sil., Sulph., Thuya.

The Cornua Humana, *or Human Horns,*

Are found on the hairy scalp and on the forehead. They mostly develop themselves out of *wens*, and especially out of such as contain hairs, (dermo-cystoides;) sometimes, but seldom, out of morbidly-extended *sebiparous glands.* They are found mostly in old age, and oftener with women than men.

External application of poke-berries (Phytolacca decandra) is said to have removed them.

The Telangiectasia, or Vascular Nævus, *Mother's Mark,*

Is a dilatation of a portion of that fine net-work of capillary vessels which everywhere pervade the derma, and cellular tissue. They may be situated in either of them. They form red, easily compressible, flat tumors, of different sizes. Vascular nævi are sometimes stationary, but more frequently they increase slowly in size; and we often find enlarged blood vessels in their vicinity. They generally appear on the scalp, and still oftener on the forehead.

Therapeutic Hints.—Fluoric ac., Stront., Sulph., Silic.

The Hair.

Alopecia—*its falling off*—may originate in various conditions. It frequently occurs after severe illness,—especially typhoid fever,—chronic headaches, chronic eruptions of the scalp, etc. In order to ascertain the cause, the scalp ought always to be critically examined. Also, so called cosmetic means may bring it on.

Baldness is more or less an attribute of advanced age; it is found more in men than in women. Castrates or eunuchs never get bald.

Therapeutic Hints.

Kali c., with great dryness of the hair.

Hepar s., Phos., Sep., Sil., after chronic headaches.

Kali c., Nitr. ac., after nervous fevers.

Phos. ac., after great anxiety and grief.

Besides these compare Ambra, Am. c., Baryt. c., Calc. c., Con., Graphit., Lyc., Natr. m., Sulph., Zinc.

The cutting of the hair is often attended with great effect upon the general system. *Colds in the head* are a very frequent consequence, and in children even *spasms* may result therefrom. But there are also cases on record where it proved beneficial to patients, relieving them of headache, and in one case even from a sort of mania.

The changing of color into gray and white is usually a process of age; but grief, sorrow, and worriment may bring it on much before its time, and sometimes in a very short time. There are a number of cases related where this change took place during one night in consequence of terror, or other violent emotions of the mind, so that the poet says: "O nox! quam longa es, quæ facis una senem!" (O night! how long art thou, that colors black hair gray!) But of late, these instances have been much doubted, because they are not well authenticated. However that may be, so much is certain, that strong mental emotions have a great effect upon the discoloration of the hair.

Therapeutic Hints.—Bad consequences of cutting the hair are mostly removed by Bell. or Bry.

The process of growing gray and white we best leave undisturbed, unless we choose remedies for its next causes. All of the so-called cosmetic means are hurtful, sometimes dangerous; and the vain will be punished for his vanity.

The plica polonica—matted hair—as is here and there found in Poland, is, according to Hebra, an *eczema* of the scalp, forming crusts, and matting the hair together in a most hideous manner.

EYES.

Fœtal Development of the Eye.

The eyes are first seen as two little vesicles, which protrude from the sides of the anterior or the first segment of the embryonic brain, which consists itself of three such segments, or cells; the primitive eye-cells being protrusions out of the anterior cerebral cell; each of them remains connected with the anterior brain segment by a hose or tube, which is the beginning of the optic nerve. The eye-vesicles themselves move gradually down to the lower portion of the anterior brain segment; and, after this has become divided into the proper anterior and middle brain, they are seen located on the lower portion of the latter.

In its further progress, the eyeball develops itself partly out of the primitive eye-vesicle, forming the retina, partly out of an inversion of the external skin, forming the lens and vitrous body, and partly from the middle layer of the primitive ovulum, forming the sclerotica and cornea.

The eyelids are first seen about the commencement of the third month, and originate out of a fold of the external skin; whilst the lachrymal ducts are, in the beginning, mere grooves in the corresponding bones, which are gradually converted into closed channels.

Considering the eye as a whole, we find its general appearance frequently altered by disease. Without dwelling upon the language which the mental emotions—fright, terror, joy or sorrow, love or hatred—speak through them, we observe—

An unnatural lustre of the eyes in fevers; and

A brilliancy in consumptives.

Glassy eyes are characteristic, in children, of inflammation of the mesenteric glands; and, if accompanied with dark, dry lips and tongue, dry skin, and great restlessness, of an acute inflammation of the stomach. In fevers they indicate great danger, or critical changes.

Dull eyes are frequently observed in febrile conditions of the system; during catamenia, in catarrhal, and other affections.

Sunken eyes are the consequence of an absorption of the fat cushions, whereupon the eyeballs rest and turn in their sockets. This takes place in all diseases which are accompanied with great loss of blood or other vital fluids.

In treating of the particular *diseases* of the eye, I hope to embrace all that a Homœopathic physician—without being a special "eye-doctor"—may need in his daily practice, and under the following heads:

I.—Inflammation.

The old definition of inflammation—calor, dolor, rubor, tumor—(heat, pain, redness, swelling) does not exactly cover all ground; because an inflamed cornea does not look *red*, but *dull-grayish*, and an inflamed iris changes its *blue* color into a *greenish tint*, and its *brown* into a *reddish color*. But inflammation is always characterized as *a local irritation, a continued congestion*, causing *a change of structure*, through the agency of exudation.

This process may go on in any part of the eye; and the several inflammations have received names in accordance with the tissues involved: *blepharitis*, in inflammation of the lids; *conjunctivitis*, of the conjunctiva; *iritis*, of the iris; *choroideitis*, of the choroidea; *capsulitis*, of the capsule of the lens; *retinitis*, of the retina; and *panophthalmitis*, when the whole eyeball is involved.

But, moreover, inflammation has been divided, according to its origin, into *idiopathic*, and *specific*, or *dyscratic* inflammation.

Idiopathic inflammation is that form which is caused by external influences, as, mechanical or chemical irritation, too cold or too hot air, sharp winds, too strong light, too great exertion of the eyes. And as, by these agencies, any part of the eye may become affected, idiopathic inflammation will therefore be subdivided, according to its seat, into blepharitis, conjunctivitis, and so on.

Specific or dyscratic inflammation is that form which originates in individuals of an already-diseased constitution, so that such an inflammation, set up, perhaps, by some slight exciting cause, soon assumes the character of the general diathesis of the system, and becomes, according to the prevailing nomenclature, either a *catarrhal, scrofulous*, or a *syphilitic* ophthalmia, as the case may be; or, it bursts forth without any external provocation, a natural development of such diseased organization, the product of a specific or dyscratic state of the system.

The most frequent forms of inflammation of the eyes with which we meet in practice are—

Blepharitis, *Inflammation of the Eyelids.*

It commences on the edge of the eyelid, and thence spreads over the whole lid to the margo orbitalis, where it abruptly ceases. By

this it is distinguished from erysipelas, which is apt to diffuse itself further and further. The lid is hard, swollen, and red, sometimes covered with little blisters.

Its terminations are: *resolution,* the most frequent; *formation of an abscess,* rare; *mortification,* scarcely ever met with under good Homœopathic treatment.

Therapeutic Hints.

Aconite, red, hard, swelling; discharge of mucus from the eyes and nose, brought on by exposure to cold northwest winds.

Apis, œdematous swelling; burning and stinging; lids turned inside-out; granulations on their edges; falling out of eyelashes.

Belladonna, lids inflamed inside, mostly right side; photophobia; lachrymation.

Hepar, affection of the Meibomian glands; suppuration; styes.

Rhus t., from left to right, swelling; dull redness; watery vesicles.

Graph- 1 to 8 gr- + 1 ℥ vaseli

Dacryo-cystitis, *Inflammation of the Tear-bag,*

Anchilops, *Inflammation and Swelling at the inner corner of the Eye and Nose,*

Are two complaints, which resemble each other very much. Both are swellings of the inner corner of the eye, where the saccus lachrymalis is situated; both may gather and break, and both may be the cause of *a fistula lachrymalis,* by their attacking the lachrymal duct, which swells, closes, and by suppuration forms an opening in the eye corner, through which issue lachrymal fluid and pus.

They may, however, be easily distinguished. *Dacryo cystitis* is an inflammation of the lachrymal sac; *anchilops* is an inflammation of the skin and the subcutaneous cellular tissue of the inner corner of the eye, which affects the interior wall of the lachrymal sac, but only secondarily. *Dacryo-cystitis* is a swelling, which is easily pressed together, discharging a lachrymal fluid; *anchilops,* however, is a hard swelling, which does not discharge any fluid, when pressed upon. When *dacryo-cystitis* breaks, it discharges slime and tears; the discharge from *anchilops* is pus only, except at a later period, when the lachrymal sac has become involved, and the discharge becomes mixed with slime and lachrymal fluid.

Therapeutic Hints.

Dacryo cystitis, at the beginning, Puls.

Anchilops, at the beginning, Bell., Hepar s.

Fistula lachrymalis, in consequence of either of them, Calc. c., **Fluor. ac.**, Graph., Lach., **Petr.**, Puls., **Silic.**, Staphis., Stann., Sulphur.

Conjunctivitis and Ophthalmia Catarrhalis

Are inflammations of the conjunctiva, which, in practice, there would be difficulty in discriminating, even if there were any practical use in it, which there is not. The first we find spoken of in books as *idiopathic*, and the latter as *specific* or *dyscratic inflammations*. Each is an inflammation of the conjunctiva, either of the palpebræ or bulbus, or of both together. There is considerable redness of the white of the eyes, the blood-vessels become enlarged, run in parallel lines towards the cornea, and form in its margin a net-work of capillary vessels. As the inflammation goes on, an exudation of lymph takes place, which distends and swells the conjunctiva to a kind of bladder, surrounding the cornea like a wall. This state of things is called *chemosis*. Still later the capillary vessels may burst, and the conjunctiva becomes dark red and solid, swelling to such a degree that it may protrude beyond the closed eyelids. There is considerable discharge of purulent matter—*opthalmo-blennorrhœa*. Should the lids stick together—which is often the case—the matter collects behind the lids, and runs, when the lids are opened, in a full stream down the cheeks.

Catarrhal conjunctivitis is always *better in the morning and worse from early evening until about midnight*, when all the symptoms again become less violent. When conjunctivitis assumes a chronic form, its symptoms are the same, but less violent.

Therapeutic Hints.

Acon., from cold winds, or when foreign bodies, like cinders, pieces of steel, &c., fly into the eye. + Kent

Arsen., burning pain, lids spasmodically closed.

Bell., right eye, throbbing pain, hot tears, or dryness of the eyes; light is painful; nose sore from coryza.

Digitalis, chronic; a yellowish redness of the conjunctiva palpebrarum.

Euphorbium, purulent discharge; feeling of great dryness in the eyes, with profuse discharge; excoriations in the eye-corners.

Euphrasia, chemosis; acrid tears; coryza with burning; discharge from the nose and pain in the frontal sinuses.

Merc. sol., cold in the head; running of the nose.

Nux v., the inner canthi are more inflamed than the remaining portions, or bloody ecchymosed spots on the conjunctiva, smarting like salt, worse in the morning.

Puls., pressing pain; smarting tears, worse in the evening.

Rhus t., great swelling of the conjunctiva; little discharge; very painful.

Of the same nature as the above is

Ophthalmia Neonatorum.

This is a conjunctivitis, which often befalls new-born children; hence its name. It is characterized by the same symptoms as ordinary conjunctivitis. When badly managed, suppuration may destroy the cornea, thus rendering the child blind for life.

Therapeutic Hints.

Acon., at the beginning; redness of the eye; no discharge; restlessness; dry, hot skin.

Arsen., Natr. mur., after external application of nitrate of silver.

Cham., colic; green discharges; restlessness.

Lycop., copious discharge of pus; the lids are puffed out by pus beneath; the conjunctiva looking like a piece of raw flesh.

Merc. sol., thin mucous secretion from the eyes; green diarrhœic stools; soreness of the anus; jaundice; syphilitic infection.

Rhus t., the swollen conjunctiva protrudes from between the lids like a pad, when they are opened.

Sulph., thick pus in large quantities.

Ophthalmia Scrofulosa.

Scrofulous inflammation generally attacks both eyes, going from one to the other. The patients shun the light more than the amount of inflammation would lead us to expect. They keep their eyes constantly covered, and bury their faces into the bed-pillows. For this reason they always feel *better when night comes, and get worse again as soon as the sun rises;* a symptom which distinguishes this form of inflammation from ophthalmia catarrhalis, in which it is just the reverse. Frequently we find such patients *pressing their hands upon their eyeballs*, which gives them relief, and which is a pathognomic symptom of this complaint. There is a periodical flow of hot and acrid tears, corroding the adjacent parts. The Meibomian glands secrete more slime than usual, which sticks to the tarsal edges of the

lids and to the eyelashes, forming hard, brownish crusts, under which the skin becomes irritated, and the eyelashes are apt to grow in a wrong direction, (false hairs,) or they fall out altogether, when the tarsal edge becomes hardened and full of little furuncles.

The conjunctiva bulbi is at first inflamed only in patches of a palish redness, the blood-vessels run in lines from the canthi towards the cornea, leaving white stripes of conjunctiva between them. On the edge of the cornea they form a network, and out of it some of these enlarged capillary vessels extend over the cornea, where some little blisters are seen to be forming, containing a purulent fluid. The cornea then becomes suffused, grayish, opaque, and in severe cases the inflammation extends even to the iris.

It is a severe and often very stubborn complaint. Badly managed, it may terminate in long-lasting, sight-hindering spots on the cornea; in prolapsus iridis, or staphyloma, in case these little ulcers perforate the cornea; in an effusion of pus into the eye-chambers, (*hypopyon*,) in case the cornea and iris are involved in the inflammation. Comparing scrofulous with catarrhal inflammation, we establish the following diagnosis:

Scrofulous Inflammation.	*Catarrhal Inflammation.*
The conjunctiva is red in streaks, the blood-vessels run in bundles from the canthi towards the cornea, leaving between them white stripes of conjunctiva.	The conjunctiva is red all over, the blood-vessels run parallel towards the cornea.
Secretion is hot, acrid, corroding.	Secretion is mild, puriform.
Photophobia is stronger than the objective inflammation seems to indicate.	Photophobia corresponding with the degree of inflammation.
Exacerbation from morning till night; amelioration evening and night.	Exacerbation towards evening; better in the morning.

Therapeutic Hints.

Apis, eyelids swollen, inflamed, turned inside out, granulated; eyelashes fallen out; conjunctiva injected; chemosis; cornea grayish, smoky, opaque; pain, *burning-stinging*.

Arsenicum, lids spasmodically closed; conjunctiva inflamed; looking like a piece of raw beef; cornea degenerated; *burning pain;* on

the face a fine eruption, and under the eyes places excoriated by the acrid discharge, which are sometimes covered with crusts.

Aurum, nightly agglutination of the lids; a pannus-like extension of enlarged blood-vessels over the cornea to the pupil; great photophobia; hot, burning tears when attempting to open the eyes; *cutting pain* through the eyes; excoriations on the cheeks and swollen glands on the neck; after the abuse of Mercury.

Belladonna, slight redness; scalding, acrid tears; great photophobia.

Calcarea c., spasmodic closure of the lids and photophobia; ulcers on the cornea; *stinging pain*, worse from candle-light; difficult hearing; sweat on forehead; thick, red nose with acrid discharge, or nose stopped up; swollen upper lip; swollen glands on the neck; large abdomen; great desire for eggs.

Causticum, pressing pain relieved by external pressure; yellowishness of face; warts on eyebrows and nose.

Conium, chronic; great photophobia without much inflammation.

Hepar s., especially after the abuse of mercury; ulcers on the cornea.

Mercurius sol., worse from slightest cold; lying on the face through the day; peevish, troublesome; nose full of mucus.

Mercurius subl., lids swollen and spasmodically closed,—the upper reaching over the lower, like a pad; ulcers and chalk-white excrescences upon the cornea; pus in the anterior chamber of the eye; cheeks around the eyes covered with pustules; glands of neck hard and swollen; eruption on occiput.

Natrum mur., thin, watery, excoriating discharge from the eyes; after the abuse of nitrate of silver.

Rhus tox., pimples and vesicles on the cornea; eruptions on the head and face; swelling of glands behind the ears; disposed to weep.

Sulphur, chronic; edges of lids thickened and ulcerated; outer canthi red; cornea surrounded by a pale-red ring; spots and ulcers upon the cornea; stitches through the eye into the brain; double sight; eruptions over the body; swollen glands; diarrhœic stool, worse in the morning.

Besides these there are recommended: Baptisia tinct. and Podoph.; the latter especially, if worse in the morning.

Ophthalmia Syphilitica

Is an inflammation found, as its name implies, in persons afflicted with syphilis. There are two distinct forms of this malady,—

Ophthalmia gonorrhoica, and

Ophthalmia syphilitica stricte sic dicta.

Ophthalmia gonorrhoica is a conjunctivitis, which is brought on either by a suppression of gonorrhœa or by accidental poisoning of the eye with gonorrhœal discharge. The inflammation attacks first the conjunctiva, which swells rapidly, to such a degree that it not only surrounds the cornea like a wall, but overlaps and covers it, making the eyeball appear like a piece of raw meat. The cornea and iris likewise become involved in the inflammatory process, and the whole is of such an acute nature that the coats of the eye may become perforated, discharging their entire contents in the course of twelve or twenty-four hours.

Ophthalmia syphilitica, strictly so called, is a symptom of chronic syphilis. It attacks primarily the iris, which changes its natural color into brown, reddish spots. These spots swell to uneven protuberances, and appear like condylomatous excrescences. The pupil of the eye contracts and becomes distorted, especially towards the inner corner of the eye. All around the cornea there is a deep-seated, reddish, inflamed ring, and the cornea itself becomes opaque. The conjunctiva bulbi grows pale-reddish; at the same time there are other symptoms of lues venerea, so that this affection is easily diagnosticated.

Therapeutic Hints.

Argentum nitr., lids swollen; thick, puriform discharge; granulated degeneration of the conjunctiva.

Cinnabaris, condylomatous excrescences on the iris, edge of the pupil, or the edge of the lids.

Kali bichrom., pustules on the cornea, surrounded by indolent inflammation; pale reddish ring around the cornea; eyelids granular; ulceration in the fauces.

Nitric ac., lids swollen, hard, livid; copious yellow discharge running down the cheeks; region around the eye painful and sore to the touch.

Phytolacca dec., reddish-blue swelling of lids; left eye worse; worse also in the morning, and when closing the eye; granulations; circumorbital pain.

Pulsatilla, or **Tartar em.**, after suppressed gonorrhœal discharge. These discharges are often brought back by these remedies.

II. Products Resulting from Inflammation.

Chalazion, *Hardened Stye*,

Is, in its nature, nothing but a once-inflamed sebaceous gland, or common stye, which, however, did not discharge, but became indurated, and continues to be in this state,—a hard, round, colorless little swelling on the edge of the eyelid.

Therapeutic Hints.—Graphites, Puls., Sepia, Staphis., Thuya.

Tylosis, *Callosity of the Edges of the Eyelids*,

Is an induration of the Meibomian glands, making the edge of the lid hard, roundish, and uneven. The sound eyelashes have fallen out, and instead of them there are a few thin hairs growing in an inward direction, thus irritating the eyeball. This deformity is the consequence of a preceding blepharitis.

Therapeutic Hints.—Borax, Rhus t., Spigel.

Onyx, *or Abscess of the Cornea.*

This appears like a little, circumscribed, yellowish spot in the tissue of the cornea, which contains pus. It is a result of inflammation, and may form on any part of the cornea.

Therapeutic Hints.—Calc. c., Hepar, Merc., Silicea, and others.

Hypopyon

Is a collection of pus in one or both of the eye-chambers; and is caused by either an abscess of the cornea, which breaks towards the interior, or an inflammation and consequent purulent deposit in the iris.

Hypopyon differs from onyx in the following particulars:

Hypopyon.	*Onyx.*
The pus lies always behind the lower segment of the perfectly transparent cornea.	The pus may form at any point of the cornea, which is at that point opaque.
As the pus collects behind the cornea, in the anterior chamber, it forms, as high as it reaches, a	The pus is encased between the lamellæ of the cornea in various shapes; and the different positions

Hypopyon.	*Onyx.*
level surface, which changes, according to the position of the head, like any fluid in an ordinary vessel.	of the head can have no influence upon their position or shape.
Looking sideways upon the eye, the cornea appears perfectly clear.	By looking sideways upon the eye, we clearly see the place where the pus lies imbedded within the cornea.

Therapeutic Hints.—Ars., Hepar, Merc. sub., Plumb., Sulphur.

Staphyloma Corneæ.

When, in consequence of inflammation, the cornea and iris grow together, and the cornea becomes changed in its texture, and when, at the same time, the aqueous humor in the posterior eye-chamber increases, then the cornea commences to bulge out, either partially or wholly; and this partial or total protrusion of the cornea is called staphyloma. In this condition of things the structure of the cornea is always changed. It becomes opaque, and is softened. The most protuberant portion of the cornea becomes thinner, while the remainder of it gains a greater consistency and opacity. The protrusion may assume a spherical or conical shape. Such degeneration of the cornea of course destroys the sight.

Therapeutic Hints.—Apis, Sulphur, Silicea.

Cataracta Lentis et Capsulæ, *Lental and Capsular Cataract.*

We understand by this expression a dimness or opacity of the lens and its capsule, by which the sight becomes either partially or totally destroyed.

In examining the eye, we observe immediately behind the pupil a grayish, opaque, and convex body—the lens, which has lost its transparency. The change towards opacity may be either slow or quick; there are cases on record in which a cataract had been formed in a single night; but it usually occupies several months, and even years. In proportion as the opacity increases, the sight becomes dimmer. There is this peculiarity about this disease: the patient sees better

towards evening and in cloudy days than in bright sunshine, because then the pupil is more dilated, and the light can pass around the cataract into the eye.

When the cataract is perfect, we observe behind the pupil a dark ring encircling the grayish body, which is nothing else but the shade falling from the iris upon the opaque lens.

Therapeutic Hints.

Ammonium carb., especially the right eye.

Belladonna, after an acute inflammation of the eye.

Calcarea c., in scrofulous individuals.

Causticum, constant inclination to touch and rub the eye, which seems to relieve a pressure in it.

Lycopodium, after typhus; suppressed menses.

Magnesia c., from left to right; previous disposition to headache and furuncles.

Silicea, after inflammation of the eye; preceding ringworms; suppressed sweat of feet.

Sulphur, from right to left; after cutaneous eruptions, especially itch.

Glaucoma

Is a morbidly-altered state of the choroidea or choroid tunic, causing a sea-green opacity deep in the fundus of the eye, which appears concave. In some cases the vitreous humor of the eye has been found of a greenish color. During the progress of the disease the pupils become enlarged and distorted, the iris discolored, the cornea dim, the sclerotica staphylomatous widened. The loss of sight is much more rapid than the greenish opacity would at first seem to warrant. The patient sees better by strong than by dim light. Its progress is slow. Both eyes may be affected at the same time, but are seldom attacked simultaneously.

Therapeutic Hints.—Phosphorus.

Amaurosis.

Although this affection in many cases may be primarily a dynamic affection of the optic nerve and the retina, nevertheless it is also in many cases the result of inflammation and apoplexy. This may justify me in speaking of it in this connection.

There are few objective signs, which characterize the complaint. The pupil, although in the beginning movable, gradually enlarges, becomes rigid, and does not quite keep its circular shape. Deep in the fundus of the eye we observe sometimes a dirty, smoky, concave opacity, but not always.

The iris moves slowly, does not react against the light as before, its color changes, becoming either lighter or darker.

The loss of sight is much more rapid than these objective signs would indicate. But as long as there is some eyesight, the patient sees better in the morning, after a refreshing sleep, than at any other time.

Cataract, glaucoma, and amaurosis are to be distinguished in the following way:

Cataract.	*Glaucoma.*	*Amaurosis.*
Convex, grayish opacity immediately behind the pupil.	Concave sea green opacity deep at the fundus of the eye.	Concave, dirty, smoky opacity deep at the fundus of the eye; sometimes absent.
The pupil is movable, generally circular, not dilated.	The pupil is immovable, distorted, dilated.	The pupil is immovable, not quite round, and dilated.
The loss of sight is proportionate to the opacity.	The loss of sight is greater than the opacity would seem to indicate.	Great loss of sight, with little or no opacity.
Sight better in dim light.	Sight better in strong light.	Sight best in the morning after refreshing sleep.

Therapeutic Hints.

Aurum mur., sudden attack after scarlet fever and during childbed, with cold perspiration, small pulse, quick, irregular breathing.

Belladonna, after suppressed scarlet eruption, with cerebral symptoms.

Gelseminum, with thirst for light; after apoplexy, congestion to the head.

Nux v., in consequence of habitual use of intoxicating drinks.

Phosphorus, previously illusions of sight, and after sexual excesses.

Secale cor., with photophobia; suppressed secretion of tears; stitching pain in the eyes; dilated pupils; blue and fiery dots flying before the eyes.

Sulphur, after suppressed itch.

Veratrum viride, immense circles of green color around the candle, which, on closing the eyes, turn red; vertigo; after loss of vital fluids.

Zincum, suddenly coming and going, with headache; contracted pupils.

III. Pseudo-formations.

Tumores Cystici, *Encysted Tumors.*

These are degenerated sebaccous glands, which are situated in the cellular tissue of the lids. They consist of a sac or cyst, the contents of which are of various characters; sometimes hard; semi-fluid, like wax; mixed with hairs. On pressure they are movable under the skin, and are of variable size.

Therapeutic Hints.—Calcarea c., Thuya.

Pterygium, *Wingskin.*

This is a triangular or wing-shaped morbid growth on the conjunctiva. Starting with its broad base at the corner of the eye, it reaches with its apex the edge (seldom the middle, and still more seldom crossing the middle) of the cornea. It is loosely connected with the conjunctiva. It generally makes its appearance at the *inner*—rarely at the *outer*—corner of the eye. Very rarely it appears on the upper or lower part of the eyeball. These growths are of different consistency and color: some look red, inflamed, and are full of blood-vessels; some are quite thin, almost transparent; and still others are thick and of a whitish or yellowish hue.

Therapeutic Hints.

Arsenicum, Spigelia.

Argentum nit., pinkish redness of the conjunctiva.

Zincum, severe pressure at the root of the nose and across the supra-orbital region, lachrymation which is worse in the evening.

Pannus, *Vascular Skin over the Eyeball.*

This seems to be, primarily, an inflammation of the conjunctiva bulbi. Small blood-vessels run from the white of the eye towards the cornea, and over it. By-and-by they enlarge in size, and increase in number from all sides, thus forming a dense net-work of blood-vessels over the whole eyeball, to such a degree that neither cornea

nor pupil can be seen through it; and the whole eyeball appears like a piece of raw meat.

The pathognomonic distinction between this affection and conjunctivitis is, that in the latter the net-work of blood-vessels seldom extends over the cornea, but *around* it, exhibiting there considerable swelling of the conjunctiva, with effusion. The sight is, of course, impaired, or totally destroyed.

Therapeutic Hints.—Ars.? Aur.? Merc. subl.?

Fungus Oculi, *Fungus of the Eye.*

This is a malignant pseudo-formation, characterized by an abundant vascularity and a soft texture, which is easily lacerated, and bleeds from the slightest wound. This is *fungus hæmatodes*. *Fungus medullaris* consists of a mass similar to marrow.

They are found on different parts of the eye, and have been named according to their location:

Fungus carunculæ lachrymalis, which is a malignant degeneration of the eye-caruncle;

Fungus conjunctivæ, which grows upon the conjunctiva, and may be a fungus hæmatodes or medullaris; and

Fungus medullaris bulbi, which develops itself upon the retina, appearing first as a grayish, or yellowish, or greenish opacity, deep in the fundus of the eye. It soon grows to an uneven mass, extending towards the front, pressing the vitreous humor and lens out of their positions, which, in consequence, degenerate. Then the bulbus grows larger, becomes harder, and its surface uneven and knotty. It protrudes out of its socket, until, finally, the fungus bursts forth through the cornea, and appears like a purple or yellowish, soft, spongy mass, which bleeds easily, and constantly secretes a fetid, thin, ichorous matter. The glands of the adjacent parts swell at the same time, and the patient dies from exhaustion.

Therapeutic Hints.—Ars., Cannab., Carb. an., Phos., Sepia, Thuya.

Scirrhus and Cancer

Are merely two different stages of the same malignant disease, which seems to manifest a preference for glands.

Scirrhus commences as a small swelling, with a nucleus as its centre, from which white stripes run towards the periphery. These

radii are separated by a whitish, fatty substance. There are often several such swellings near together, which gradually unite, and form one hard, knotty swelling. In its further progress, growing larger and larger, it inflames and ulcerates *within*. Thus far, this complaint is called *scirrhus*. By the continued suppurating process within, the tumor bursts, and discharges its fetid, thin, ichorous matter exteriorly, when it is called *open cancer*. It spreads rapidly, and destroys life in a short time.

Scirrhus and cancer of the eyes is found starting at the lachrymal caruncle, at the tear gland, at the eyelid, and sometimes within the eyeball itself, after a long, chronic inflammation and staphylomatous degeneration.

Therapeutic Hints.—Ars., Bell., Calc. c., Carb. an., Hydrastis, Lachesis, Phos., Sepia, Silicea, Thuya.

The individual case may, however, suggest still other remedies.

IV. Affections of the Motory Nerves of the Eye.

The muscles of the eye, lid, and iris are under the control of the third, fourth, fifth, and sixth pairs of cerebral nerves. The abalienation in the motion of the eye consists either in an increased action—*spasmus*—or in an impaired or total loss of action—*paralysis*. We have therefore to distinguish two kinds of morbid affections in the motory system of the eye,—*spasms* and *paralysis*.

Blepharo-spasmus, *or Spasms of the Eyelids.*

This is either a *tonic spasm*, in which the eyelids suddenly, by a spasmodic contraction of the musculus orbicularis, become tightly closed to such a degree that neither the patient nor anybody else can, by external force, open them. In such cases *Viola adorata* and *Symphitum* have been found useful, the latter after a blow; or

A clonic spasm, in which the eyelids constantly, in quick succession, open and shut, which is technically called *nictitatio morbosa*. Here *Agaricus* is frequently indicated.

Ophthalmo-spasmus, *or Spasms of the Eyeball.*

This also is either *tonic* or *clonic*.

If *tonic*, then the eye is set, motionless, and drawn either to that side where the muscles are spasmodically contracted; or the eyeball

stands motionless in the middle, but is drawn back into the orbit. This is the case when all the muscles are contracted at the same time. In the first case, the pupil is drawn sideways, whilst in the latter it is dilated.

If the *spasms be clonic*, then the bulbus is in a constant swinging motion, from side to side, and in very quick succession, so that the patient is incapable of holding the eye still for a moment. This complaint is sometimes congenital, and seems not to interfere at all with the sight of the patient.

Strabismus, *Squinting.*

This differs from both of these spasmodic affections. It is an involuntary turning of the eyeball out of the natural axis of sight, whereby, however, the patient retains the ability of turning the eye in the opposite direction. This is impossible in one-sided tonic spasm.

The deviation from the natural axis of sight is either *converging* or *diverging*, either *upwards* or *downwards*, or even with *one eye* upwards and with the *other* downwards. On account of its exceeding ugliness, this latter has been styled *strabismus horridus*. In all these different deviations from the natural axis of sight, one eye may be affected, or both may be involved. Each eye will assume immediately the normal direction if the other be closed.

The causes are various.

We have found squinting to be a sign of some cerebral affections, especially of hydrocephalus acutus, apoplexy, and others.

It may be a hereditary fault.

It may be acquired in early childhood by one-sided exercise of the eyes, caused by inattention to the child, in keeping its head in an improper and unfavorable position for seeing the things around the cradle.

It may be caused by weakness of one eye, in which case only the stronger eye performs the function.

It may have its origin in spots on the cornea, or in cataract, or in hypertrophy of the contracted eye-muscle, or in a wrong insertion of one of the eye-muscles.

It may be caused by irritation in the intestinal canal by worms, or by catarrhal affections.

Therapeutic Hints.

Belladonna, Gelseminum, Hyoscyamus, Sulphur, cerebral irritation with corresponding symptoms.

Cina, so-called "worm signs," picking nose; restless sleep; grating of the teeth; short hacking cough through the night, &c.

Cyclamen, left eye drawn towards the inner canthus after unsuccessful operation.

Spigelia, intestinal irritation; constant itching at the anus.

Sulphur, cerebral or intestinal irritation; nightly itching of the skin; cutaneous eruptions; disposition to costiveness.

Blepharo-plegia, *Paralysis of the Eyelids.*

This is either a paralysis of the *musculus levator palpebrarum*, in consequence of which the upper eyelid falls down and cannot be raised; or it is a paralysis of the *musculus orbicularis*, in consequence of which the eye cannot be closed, even in sleep; or it is a paralysis of *both of these eye-muscles*, in consequence of which the eye is neither closed nor fully open, but half open.

This affection is generally a sign of disorganization in the brain; it may, however, be brought on by rheumatic affections, or injuries of these muscles.

Ophthalmo-plegia, *Paralysis of the Eyeball.*

This affects either one or several muscles, and causes the eyeball to stand crooked in the orbit, or it is a paralysis of all the muscles of the eyeball, and this causes a *prolapsus bulbi*. The sight is in such cases much obstructed or entirely destroyed.

This kind of paralysis is generally accompanied by blepharo-plegia, and is sometimes complicated with amaurosis.

EARS.

ANALOGY BETWEEN THE EAR AND THE EYE.

At first sight, these organs seem so entirely unlike each other, that it would seem scarcely possible to discover any analogy between them; but on closer inspection, it appears to me so striking that I am astonished at not finding it recognized and recorded in any of the works on anatomy and pathology.

As I consider this similarity in the structure of the eye and ear of great importance in clearing up the rather occult affections of the ear, (the treatment of which is often very difficult,) I shall point out, with some detail, the following quite remarkable features of similarity between the organ of sight and the organ of hearing.

The *pinna* corresponds to the *upper* and the *tragus* to the *lower eyelid.* In animals the auricle is even movable, to collect or reject sounds, as the eyelids are to take in or to keep out the light.

The eyelashes are represented by *the bristly hairs at the mouth of the meatus externus;* to keep out dust and insects.

The meatus externus is lined by a *semimucous membrane,* secreting earwax, corresponding to the conjunctiva of the eye, which secrets eye-butter, both of which are subject to exactly similar inflammations and mucous or purulent discharges.

Next comes the *membrana tympani*, corresponding not only in function, but also most strikingly in structure, with the *cornea.* It collects sounds, while the cornea collects light; and it is, at least, of a *half*-transparent texture. The diseases to which it is liable correspond with those of the cornea: inflammation, thickening, ulceration and perforation.

Immediately back of this membrane, in the middle ear or tympanum, lie *the ossicula auris,* those little bones, by which sound is broken and communicated to the auditory nerve, in the labyrinth, just as the light, by means of the *crystalline lens*, is to the optic nerve. *The middle ear or tympanum*, with its ossicula, corresponds, therefore, precisely to *the anterior and posterior chamber of the eye* with the lens.

Still further back we come into *the labyrinth* of the ear, which is filled, in its membranous portion, with *a limpid fluid,* first well described by Scarpa; and which corresponds perfectly to the *vitreous humor* of the eye: whilst the numerous filaments of the two branches of the auditory nerve, the vestibular and cochlear nerves, spread out into *a nervous membrane*, resembling closely that of the *retina,* so that the *labyrinth of the ear* corresponds entirely to *the posterior part of the eye* with its vitreous humor and its retina.

There is one appendix to the ear—*the Eustachian tube*—which starts at the tympanum, and opens into the lateral wall of the throat, and there is also one appendix to the eye—*the lachrymal duct*—which starts at the inner canthus of the eye and opens into the nose; the former carrying away secretions from the tympanum, and the latter from the eye, each corresponding closely to the other; and lastly both organs are situated in close proximity to *porous bones:* the ear on the mas-

toid portion of the temporal bone, and the eyes below the frontal sinuses of the frontal bone.

This striking similarity in the structures of the ear and eye at once brings the diseases of the ear (by comparing them with those of the eye) nearer to our comprehension; and may even influence the choice of a remedy in a given case.

In detailing the special diseases of the ear, I shall make therefore a similar classification as that which was observed in those of the eye.

General Observations on the Ear.

The *auricles grow pale* from fright, chills, spasms, loss of vital fluids, exhaustion and frost. A *marked paleness* of the *left auricle* denotes inflammation of the spleen.

Redness of the auricles is found in congestive and inflammatory conditions of the head and ears.

Flushes are caused by mental emotions; or occur before bleeding of the nose, delirium, apoplexy.

An habitual or frequently-occurring redness of the auricles denotes disturbed actions in the abdominal organs; or else menstrual and hemorrhoidal affections.

A striking redness of the auricles in *new-born children* is a sign of premature birth.

Small, inflammatory, purplish, suppurating spots on the auricles are a sign of chronic syphilis.

Swollen auricles, if *inflammatory*, are caused by erysipelas, injuries, eruptions; if *habitual*, not inflammatory, it is a sign of scrofulous conditions; if *œdematous*, a consequence of abscesses or Bright's disease. The auricles are—

Hot in inflammatory and congestive conditions of the head and ears, also in consequence of great exertion of the voice, and in diseases of the larynx.

Cold, in chills, spasms, and from exhaustion. *Auricles habitually cold* are found in weak and chlorotic individuals. In *hysteric* persons, cold auricles are the forerunners of a hysterical spasm; whilst in delirium and mania they denote a cessation of the paroxysm.

Discharges from the ears may originate either in the meatus auditorius externus, in the middle ear, (the tympanum,) or even in the cavity of the skull. They are of various characters.

If, after a *fall* or *external injury* of the head, there be a discharge of *blood*, it denotes a fracture of the skull. The ears bleed also in

scorbutic affections; from too great a pressure, or from insufficient pressure of the atmospheric air, (cannon-shot; on high mountains;) from too great exertions in screaming, coughing, vomiting, straining, blowing musical instruments.

Pus or *ichorous matter* is the product of a previous inflammation either in the meatus auditorius or in the middle ear. In rare cases the pus comes from an abscess in the brain, which has broken through the petrous portion of the temporal bone.

Thin earwax is, in most cases, the consequence of a chronic inflammatory state of the meatus auditorius externus.

I. Inflammation.

It may take place on any part of this organ, and therefore we have an inflammation of the auricle; of the meatus auditorius externus; of the membrana tympani; and of the labyrinth. Wherever it be, it is characterized *by local irritation; continuous congestion;* and (as a result) *by a gradual change in structure.*

When confined to the external ear, it lies open for inspection; not so if it attack the parts of the internal ear. The fact that the passage is somewhat curved makes it impossible in many cases, particularly in adults, to examine with the eye, the parieties of the meatus and the membrana tympani at its further extremity. It will be in place, therefore, to speak here of *the best means and modes of exploring and examining these parts.*

The light should be strong, and sunlight is far the best. This, however, can seldom be made to fall upon the membrane without straightening the channel, by means of a tube, termed a *speculum auris.* The short bristly hairs at the mouth of the meatus present also an obstacle to ocular inspection. True, we may, by directing the auricle towards the sun, pulling it upwards and outwards, drawing the tragus outwards, and inclining the head of the patient strongly in the opposite direction, see the membrane, in many cases, where there is little or no disease; but generally a speculum auris is necessary; by it we are enabled to have a full view of the meatus and the membrana tympani; further, however, we cannot see. How, then, can we diagnosticate an *inflammation of the middle ear or tympanum?*

I must remark here, that this inflammation is never confined to the lining membrane of the tympanum, but that it generally involves the *Eustachian tube* and *the mastoid process,* whose numerous cells are lined by a continuation of the same mucous membrane.

But that does not improve our facilities of diagnosis; for these tissues are just as little accessible to ocular inspection. And at the beginning of an inflammation of these parts it might, indeed, be difficult to say, with positiveness, this is an inflammation of the middle ear. For, although there are numerous, and, indeed, very painful *subjective* symptoms, yet they are variable, and might indicate this or another condition. However, this uncertain state of things does not last long, before some objective signs, of which we can avail ourselves, set in. Generally, after some lapse of time, the *membrana tympani* gets involved, likewise, in the inflammatory process. If we apply the speculum auris now, we find this membrane, although still transparent, show a pale-reddish hue; by the further process it grows purple and loses its transparency. Besides this we find the inflammation spreading to the velum palati, and to the tonsils, and uvula. At the same time the hearing is much impaired, and this is especially owing to an obstruction in the Eustachian tube, either by a swelling or mucous secretion filling it and the tympanum.

"The simplest means of examining the permeability of the tube and drum is to direct the patient to close his mouth tightly and press his nostrils together with his fingers; then attempt to blow or exhale forcibly. A sensation of fulness and of crackling will be experienced in one or both ears if the passage be pervious. This is secured by the distention of the membrana tympani by the pressure of the air." (Bryan.) And if the physician lays at the same time his ear to the ear of the patient, or puts the stethoscope upon the mastoid process, he will hear plainly the rushing in of the air into the tympanum and air-cells of the mastoid process if the tube be pervious. If tube and tympanum be filled with mucus he will hear a decided mucous rattle, and if the tube be impervious he will hear nothing at all.

Richter recommends to fold the auricle over, so that it closes the external meatus; then to apply the stethoscope upon it. If the tube be pervious, we hear plainly all noises which an inspiration, or an expiration, or the voice, may produce; but we do not hear them if the tube is in any way obstructed.

The *labyrinth* is altogether inaccessible to inspection and auscultation. And although pathological anatomy has shown and distinguished a number of organic changes, which no doubt were in connection with impaired hearing, yet all these things are of no practical avail, because we have no means by which we could be enabled to diagnosticate them, during the life of the patient; we are here entirely

left to subjective symptoms. So much in regard to inflammation of the ear in general, and its diagnosis. Now to the special forms.

Erysipelas of the Auricle

Is mostly in connection with erysipelas of the scalp or face, and needs, therefore, no further explanation.

Intertrigo Auriculæ, *Soreness behind the Ears,*

Is a complaint mostly of little children. Appearing at first as an erythema, there soon commences an oozing of fetid matter, which hardens into crusts. Gradually the whole lobe becomes excoriated and even parts of the adjacent scalp. A sudden suppression of this eruption by external means has been found frequently to be followed by various affections of the brain and its membranes.

Therapeutic Hints.—Compare Graph., Petrol., Sulphur.

Furuncles

Develop themselves out of inflamed sebaceous glands. They thus correspond with styes on the eyelids. They are found singly, and generally at the mouth of the external meatus, closing it until they break and discharge; or they form clusters, when they develop themselves in the meatus externus.

Therapeutic Hints.—Puls., Sulph.

Otitis Interna, *Inflammation of the Middle Ear.*

It commences usually at the membrana tympani, spreads rapidly all over the tympanum, the Eustachian tube and the cells of the mastoid process, attacks the labyrinth, and may even penetrate through the petrous portion of the temporal bone, and affect the brain and its membranes. It is a most violently painful affection. Its objective symptoms are at first little marked, and stand in no proportion to the violence of the attack. The membrana tympani appears reddened, the mastoid process becomes hot, swollen, and finally red and inflamed. Little children bring their hands constantly to the affected ear, scream out loudly, throw their head from side to side, bore it into the pillows, and become still more uneasy when rocked in the cradle. If nursing at the breast, they let the nipple suddenly go and do not drink, because

the motion of sucking increases the pain; but they will take the milk out of a spoon.

One might mistake this group of symptoms for acute hydrocephalus, if it were not for the absence of *vomiting, the sighing respiration, the obstinate obstruction of the bowels, with flat, hollow abdomen, and the slow, intermitting pulse.* And also the screaming of the child is different from that in hydrocephalus; this, however, one must know from experience; it cannot be described.

It is seldom that, under judicious Homœopathic treatment, this complaint ends in a destruction of the membrana tympani or the ossicula auditus.

Therapeutic Hints.—Acon., Bell., Calc. c., Cham., Merc., Puls., Nux v., Rhus t., Sulph.

II. Products resulting from Inflammation.

Otorrhœa

Is a discharge from one or both ears, sometimes purulent. The disease is very common, particularly during infancy and childhood. From being at first a discharge from the lining membrane of the meatus auditorius externus, in consequence of previous inflammation, it gradually becomes chronic, and gives sometimes great trouble to the patient and the doctor. In teething, ophthalmia and other inflammations, nature sometimes establishes this discharge and relieves in this way the other complaints. "For this reason, which is a matter of common observation both among the profession and the people, together with the aphorism, which says, 'Suppression of discharges from the ears induces diseases of the brain,' it is an every-day affair to see otorrhœas entirely disregarded, and no means whatever taken to remedy them." (Bryan.) This neglect, or rather this fear, to touch this complaint, has no doubt its good reasons also in numerous sad experiences, which the old school has made, if its advocates succeeded in suppressing this discharge.

Therapeutic Hints.

Arsenicum, profuse, ichorous, cadaverously-smelling discharges; sinking and prostration.

Asa fœt., purulent discharge; diminished hearing; after abuse of Mercury.

Aurum, fetid discharge; caries of the mastoid process and ossicula; after abuse of Mercury.

Calc. c., purulent discharge; difficult hearing, with noise in the ears; mostly right ear; swollen glands on neck; large abdomen; little warts on hands and fingers.

Carbo veg., offensive discharge; difficult hearing; membrana tympani and external meatus inflamed, sensitive to touch; pain from right ear down the neck when turning the head; after itch-like eruptions.

Caustic., offensive discharge; paralysis of face; hardness of hearing.

Elaps, discharge coloring the linen greenish; hard hearing; stitches in forehead; lachrymation.

Hepar, scrofulous individuals; affection of the mastoid process; after abuse of Mercury.

Lycop., purulent, ichorous discharge; difficult hearing; scrofulous affections; after scarlet fever.

Merc. sol., offensive discharge; itching in the ears; vesicular eruption in the face and pustules on the lower limbs; syphilitic origin.

Nitr. ac., buzzing; throbbing in the ears; difficult hearing; obstructed Eustachian tube; swollen tonsils; after scarlet fever.

Puls., tearing, stitch-like pain; redness and swelling of the meatus; catarrhalic affection of the Eustachian tube.

Silic., boring pain; feeling of obstruction, sometimes going off with a report; swelling and redness of the mastoid process.

Sulphur, purulent offensive discharge, mostly left ear; intertrigo behind the ear; itching and bleeding after scratching; eruption on face and body.

Ulceration, Thickening, and Destruction of the Membrana Tympani.

It is an easy matter to diagnosticate these morbid changes of the membrana tympani, as they lie open to ocular inspection, by applying the ear-speculum. They may arise from inflammation of the meatus externus and its subsequent ulceration—otorrhœa; or from an inflammation of the membrane itself; or from otitis interna, and its subsequent forming of pus, by which the membrane is perforated. Thus it is not a primary affection, but always, like corneitis, the consequence of inflammatory processes in the neighboring parts.

Therapeutic Hints.—Hepar, Merc.

Besides, compare therapeutic hints to otitis and otorrhœa.

Destruction and Discharge of the Ossicula Auditus.

The ossicula can, of course, be discharged only when the membrana tympani has been previously destroyed. An examination by the speculum auris will then show the full extent of the destruction.

Therapeutic Hints.—Aurum, Asa, Hepar, Nitr. ac., Silic., as nearest related to caries in bony structures. Besides, compare Otitis and Otorrhœa.

Stoppage or Stricture of the Eustachian Tube

Corresponds exactly to the stoppage of the lachrymal duct of the eye. It can be verified by the above stated manipulation of driving the air into the tube.

Therapeutic Hints.—Compare Calc. c., Con., Gelsem., Graph., Jodium, Laches., *Nitr. ac.*, *Puls.*, Silic., Sulph.

III. Pseudo-formations.

Polypus Auris.

This morbid growth is found most frequently situated deep in the meatus externus; rarer near its mouth; and still rarer at the membrana tympani. There are two kinds of polypi: *soft* and *hard* ones. The first kind consists of a jelly-like substance, of a grayish or pale-reddish color. Such are called *mucous polypi.* The latter have more consistency, and grow upon a pedicle, which is fibrous, and contains a number of blood-vessels, by which the morbid growth obtains its nourishment. They look red, often dark-red, or bluish, and are either smooth or uneven on their surface. These are called *fibrous polypi.*

The diagnosis of polypi is difficult only as long as they are very small. When larger, they can be easily distinguished from any other affection of the ear by ocular inspection; and they attain sometimes a fearful size, so that they not only protrude from the meatus externus, but even overlap the auricle.

Therapeutic Hints.—Calc. c., Merc., Thuya.

IV. Impaired Hearing—Deafness.

The causes of deafness are quite numerous; and if they are enumerated in the order in which the tissues succeed each other from without inwards, they will appear as follows:

1st. *Any thing that obstructs the free passage of the meatus auditorius*, as foreign bodies, earwax, polypi, inflammation, collection of pus, and so on;

2d. *Morbid processes which involve the membrana tympani*, as inflammation, and consequent ulceration, thickening, degeneration, and destruction of this membrane;

3d. *Morbid processes which involve the tympanum and the ossicula auditus*, as inflammation of the middle ear and consequent collection of pus, loosening and destruction of the ossicula;

4th. *Morbid processes which involve the Eustachian tube*, as inflammation and consequent mucous engorgement or stricture in that tube; and

5th. *Morbid processes in the labyrinth and the auditory nerves*, about which we know very little, and the nature of which can rarely, if ever, be diagnosticated during the life of the patient.

In considering these different causes, it is obvious that some cases of impaired hearing, and even deafness, are certainly curable—those which are caused merely from obstruction or inflammation; whilst other cases must be considered out of the reach of any medicine, as those which are caused by partial or total destruction of certain vital parts of the ear. For example, deafness, in consequence of an obliteration of the auditory nerve, is surely as hopeless a case as amaurosis after established decay of the optic nerve.

Therapeutic Hints.

Conium, accumulation of earwax, looking like decayed paper mixed with pus or mucus, or blood-red; hardness of hearing ceasing when the wax is removed and returning with the wax.

Lachesis, want of wax; ears very dry.

Muriatic ac., accumulation of wax, which is dry and hard, and of a brown-red color.

Petroleum, a large quantity of thick or thin wax; sensation of rushing of water in the ear.

When in consequence of inflammation, compare Otitis and Otorrhœa.

Calc. c., Con., Gelsem., Graph., Jod., in consequence of catarrh of the Eustachian tube.

Nitric ac., Merc., in consequence of swollen tonsils.
Arn., Phos., in consequence of typhoid fever.
Lyc., Nitric ac., after scarlet fever.
Merc., Puls., after measles.
Petrol., Rhod., with disposition to rheumatism and gout.
Calc., Jod., Lyc., in scrofulous subjects.
Graph., in young persons with habitual herpetic eruptions in the meatus.
Petrol., in old people.
Cham., Puls., Merc., Bell., in children with otalgia.
Asarum, Magnesium, Spigel., accompanied mostly by otalgia. *Plumb.*
Nux v., Bell., Cham., lancinating pain.
Magnesium, lancinating pain on walking or talking.
Puls., burning pain with purulent discharge of blood.
Ign., tugging pains.
Anac., dragging pain in external ear.
Argent., violent, insupportable itching in the external ear.
Chelid., Puls., China, noise in the ear.
Led. pal., tinnitus aurium.
Conium, tumors and boils behind the ear.
Spongia, pimples and pustules in the external ears and pulsation in ear; ceasing on lying on the affected side.

NOSE.

GENERAL OBSERVATIONS.

1. *Concerning the indications from its form and shape.*

A *thick, swollen nose* is either a sign of inflammation (if accompanied by pain, heat, and redness) or of rhachitic and scrofulous diseases. Lovers of intoxicating drinks are generally blessed with a suspicious-looking nose of such shape.

The nose becomes *pointed, pinched,* during spasms; during a chill, and in collapse.

When in *children* the nose becomes *suddenly pointed,* it is a sign of impending spasms; an *habitually* pointed nose denotes derangement in the mesenteric glands, and general atrophy.

If the nose becomes pointed suddenly *during the act of parturition,* it is a sign of *internal hemorrhage,* or *complete exhaustion* or *threatening convulsions.*

The pointed nose of a nursing mother indicates her complete unfit-

ness for being wet-nurse. When it sets in *suddenly in severe illness*, it is always a bad symptom; being a sign of extreme exhaustion and collapse. *A heavy motion of the nasal wings* during respiration is a sign of impeded respiration, either from asthma, pneumonia, croup, dropsy in the chest, or incipient paralysis of the respiratory muscles and utter prostration.

2. *In regard to color.*

A red nose may result from a variety of causes: extreme cold air, congestions, crying, being overheated, cold in the head, worms, scrofula, intemperate use of ardent spirits. *In young girls* it denotes the setting in of menstruation.

Circumscribed redness of the point of the nose, of the cheeks, and of the forehead, with paleness and coldness of the other parts of the face, denote, in pneumonia, that suppuration has taken place.

A coppery shining redness at the root of the nose is a sign of existing syphilitic ulcers within the nose.

The coppery nose of wine and liquor-drinkers is well known.

A pale nose is found in various morbid affections; during a chill, during syncope, in spasms, from nausea, after great exertions, from sexual excesses, profuse hemorrhages, and so on. *In women* it is a sign of approaching menses or disturbed menstruation; profuse leucorrhœa; chlorosis. *During pregnancy* it is a sign that the fœtus is dead. *In eruptive fevers* it denotes a disturbance in the exanthematic process and probable metastasis to internal organs.

A grayish, lead-colored nose is found in dropsy of the chest and the pericardium, in induration of the lungs and some malignant typhoid fevers.

Single lead-colored stripes have been observed in obstinate obstruction of the portal vein.

A bluish color of the nose is found in some cases of apoplexy; in croup, in catarrhus suffocativus, in diseases of the lungs, heart, and larger blood-vessels; in short, in all morbid conditions, which cause a stagnation of blood, cyanosis.

Brownish, yellowish spots on and over the nose like a saddle indicate mostly a diseased liver or chronic leucorrhœa.

A blackish fur at the nostrils is found in typhus, epidemic dysentery, cholera, altogether in conditions of great prostration.

3. *In regard to temperature.*

A hot nose we find in violent coryza, inflammation, before bleeding, during delirium, sopor, apoplexy.

Coldness of the nose we find during a chill, spasms, nausea; from

loss of blood, exhaustion, and in consequence of inflammation of the bowels.

An habitually cold nose is found in disordered states of the abdominal viscera, in dropsical complaints, and in chlorosis.

To all this I have to add one more pathognomic sign:

The constant picking and boring at the nose, which is found frequently in consequence of irritation in the intestinal canal from worms, or in typhoid fevers, and cerebral affections. In these latter cases there is always a want of natural secretion in the nose; it is as *dry* as a powder-horn; its getting *moist* again is one of the most favorable signs in such cases.

A. Diseased Conditions of the External Nose.

Comedones, *Grubs, Worms.*

They appear like little black spots upon the nose, and consist in a retention of the sebaceous secretion, which becomes inspissated, causing a distention of the related hair-follicles. Reaching the mouth of the latter, the secretion hardens and becomes deeper in color, and at the same time, from being exposed to the dust and dirt of the atmosphere, the extremity is rendered dingy and dark-colored. If a fold of skin, including one of these spots, be pressed between the fingers, the concreted secretion is squeezed out in the form of a little white cylinder about a line in length and blackened at its extremity. It is this lengthened form of this cylinder, with its dark extremity, that has gained for it the name of *grub* or *worm*. Dr. Simon has discerned in the sebaceous matter certain microscopic animalcules, supposed to be of the genus acarus.

Acne Punctata

are *those red pimples* upon the nose and face of young men and women, which are simply inflamed sebiparous glands and related hair follicles, excited by the overload of inspissated secretion.

Therapeutic Hints.—Compare Bell., Carbo v., Hepar s., Lachnanthes, Sulphur.

After sexual excesses, Calc. c., Phos. ac., Sulph.

Acne Rosacea

is the same thing as to its nature, but attended with much more bright-red looking inflammation around the pimples. It is mostly of a chronic nature, and disfigures the face indeed considerably.

Therapeutic Hints.—Ars., Ruta, Rhus t.

Old Warts upon the Nose

Are indicative of *Causticum* in quite different complaints.

Lupus, *Wolf*,

Has its name from its exceedingly destructive character; its seat is most commonly the nose, although it is not unfrequently found on other parts of the face, lips, cheeks, eyelids, and on the neck.

"It commences as a tubercle of a dull-red color. After a variable period of time, during which the tubercle remains indolent, a thin brown and adherent scab forms upon its summit. If scratched off, another is produced in its place by the desiccation of an ichorous fluid, which escapes from the abraded tubercle. On the removal of this latter scab the skin beneath is found more or less deeply ulcerated, and the ulcer soon becomes concealed by another and larger scab.

"The ulcer, like the original tubercle, offers much difference in respect of rapidity of progress, being one while very slow, and again very speedy in its devastating course. When the latter tendency exists, the entire nose has been destroyed in less than a month. It is then characteristically termed *lupus vorax.*

"Its surface is uneven, sometimes studded with unhealthy granulations, but more frequently covered with white patches of lymph. Its edges are thickened and red, and it frequently pours forth a considerable quantity of fetid, ichorous and semipurulent fluid.

"When the ulcer heals, the cicatrix is remarkable for the white and corrugated bands and the unhealthy-looking skin, and the recurrence of the morbid action on these cicatrized spots is far from being uncommon." Wilson.

The deformity which results from this disease is sometimes quite distressing, drawing the wings of the nose, the lips and eyelids out of all proper position.

It is clear that such a violent local destruction must grow out of a deep constitutional disorder.

Therapeutic Hints.—Ars., Caust., Cicuta, Staphys.

Besides these, compare Bell., Calc. c., Hepar, Sepia, Silic., Sulph.

B. Diseases of the Nasal Cavity.

Catarrh, Coryza, *Cold in the Head.*

This is an inflammatory affection of the mucous lining of the nasal cavities, commencing generally with a dryness, which is followed by a watery or mucous discharge. It frequently spreads over the entire continuation of this membrane, upwards into the frontal sinuses, sideways into the Highmorian cavities, or backwards and downwards into the posterior nares, the fauces, down the larynx, trachea and bronchial tubes. It generally commences with sneezing, owing to the irritated state of the mucous membrane; causes, in some instances, hardness of hearing, owing to the inflamed and swollen state of the Eustachian tube; and is accompanied by a cough, which is dry at first, and afterwards loose, on account of the mucous membrane of the larynx, trachea and bronchial tubes becoming involved in the same process. Sometimes such a cold or catarrh spreads even upon the mucous lining of the intestines and causes diarrhœa. It is obvious that, the greater its extension, the more the whole organism must become involved; hence we find it frequently accompanied by chilliness and feverishness.

Therapeutic Hints.

Allium Cepa., profuse discharge of bland water *from the eyes, and burning, excoriating water from the nose;* terrible laryngeal cough, which compels the patient to grasp the larynx with his hands, for it seems to him that the cough would tear it.

Aconit., in the commencement, dry state; from dry, cold west winds.

Arsen., burning, excoriating, watery discharge, with a feeling of being stopped up.

Bell., headache worse from motion; dull pain in frontal sinuses.

Berberis, chronic form; left side; extending into the Highmorian cavity; purulent yellow or greenish discharge.

Bryon., extending into the frontal sinuses, or into the chest; stitch pain.

Calc. c., in children of scrofulous tendencies; great liability to catarrhs; stoppage of nose, or fluent coryza succeeded by colic.

Cham., chilly; feverish; thirsty; one cheek red, the other pale; rattling cough on the chest.

Cyclamen, frequent sneezing; profuse discharge; loss of smell and taste; pain in head and ears.

Eupator. perfol., hoarseness; roughness of voice; cough worse in the evening; aching in all the bones.

Euphrasia, profuse discharge of white mild mucus; eyes inflamed, and full of *acrid* tears; cough only through the day.

Gelseminum, disposed to catch cold in the head from any change in the weather; sore throat in the upper part of the pharynx; pain on swallowing, shooting up into the ear; deafness.

Hepar s., exposure to cold west winds, croupy cough, disposition to taking colds after abuse of Mercury.

Iodium, chronic, fetid discharge; nose swollen and painful; scrofulous habit.

Kali bichr., a sense of tight pressure at the root of the nose.

Lachesis, profuse discharge of a thin, watery slime; soreness of nostrils and lips; useful after suppression of a cold in the head.

Merc., dropping of water from the nostrils, nose swollen, red, sore; after sweating in the night, the cold is no better in the morning; feels bad in a warm room, and the cold he cannot bear either; epidemic form.

Nux v., at the commencement, nose dry; or fluent only through the day, and in the evening stopped up again; dry cough; constipated bowels.

Phytolacca, flow of mucus from one nostril while the other is stopped; total obstruction of the nose when riding.

Pulsatilla, thick, yellow, greenish discharge; loss of smell and appetite; no thirst; feels better in the fresh air, worse in the warm room; nose-bleed; affection of frontal sinuses.

Rhus t., thick, yellowish mucus; fever-blisters and crusts under the nose; after getting wet; aching in all the bones, worse in rest.

Sanguinaria, fluid coryza alternating with stoppage of the nose; eyes painful when touched; soreness in throat; cough, and finally diarrhœa.

Spigelia, copious discharge, badly tasting and smelling; flows during the night down into the posterior nares, and causes choking.

Sulphur, chronic form; stoppage; or thick, yellowish, greenish discharge; sore nose; deafness.

A particular form of coryza is the so-called

Yearly Cold, or Rose Cold,

Which attacks some persons at the same date every year, mostly in summer, sometimes in fall. The symptoms do not vary much from

an ordinary cold in the head, except that it is very stubborn, lasting uninterruptedly for four or six weeks.

Therapeutic Hints.—Ailanthus, Ars., Natr. c., Nux v., Silic.

The Snuffles, or Stuffed Nose of Infants,

is quite of the same nature. It hinders children in nursing, and sometimes in sleeping.

Therapeutic Hints.—**Nux v., Sambucus.**

Amm. c., when the child in the act of going to sleep starts up again on account of not getting breath.

When catarrhs become chronic, they lead to an ulcerated state of the membrane, forming constantly a fetid, putrid and puriform discharge of the most offensive and penetrating smell. This state of chronic ulceration of the mucous membrane within the nasal cavities and frontal sinuses is called

Ozaena.

Therapeutic Hints.—Compare Alumina, Asa fœt., *Aurum*, Cal. c., *Kali bichr.*, Kali hydroj., Lachesis, *Merc.*, Phos. ac., Silicea, Sulph., Baptisia tinct., Hydrastis, Phytolacca, Sanguin.

Polypi.

Therapeutic Hints.—Compare Calc. c., Natr. mur., Phos., Sang., Teucrium, Thuya.

Epistaxis, *Nosebleed.*

This affection is a mere symptom of the most different conditions of the organism. We observe it in consequence of congestive as well as in consequence of anæmic and chlorotic conditions. It may sometimes bring relief to headache and congestive states; and it may be an unfavorable sign in adynamic and contagious diseases, as smallpox and measles, when they assume a typhoid character. In diseases of the heart, lungs, and spleen, it is never a good sign. In old age it is a sign of threatening apoplexy.

Its most frequent exciting causes are, mechanical injuries; a fall or blow upon the nose; straining when coughing; and suppression

or irregularity in menstrual discharges, or a suppression of an habitual hemorrhoidal flow.

The blood itself varies greatly in character. It may be *bright-red*, or *dark*,—almost black; it may easily *coagulate*, and it may be quite *thin*, and never coagulate.

Generally, one nostril only bleeds; seldom both. The blood discharges either through the nostrils in front, or backwards, through the posterior nares, into the fauces, thence into the stomach or the larynx. This last phenomenon requires a little attention, so as not to confound it with vomiting of blood, or bloody expectoration from the lungs.

Therapeutic Hints. — In general, *bright blood*, Acon., Arn., Bell., Bry., Dulc., Hyosc., Millefol., Rhus t., Sabad.

Dark blood, Crocus, Nux v.

Clotted blood, Cham., Merc., Rhus t., Plat.

Acon., in arterial congestive bleeding.

Agaricus, in old people with relaxed state of the circulatory system.

Am. c., in the morning, when washing.

Arnica, after external injury.

Arsen., after a fit of passion or vomiting; great heat and restlessness.

Bellad., congestion to the head; worse from motion, noises, and bright light; sparks before the eyes; noise in the ears; fainting.

Bryonia, in the morning after rising; vicarious menstruation.

Carbo veg., profuse and long-continuing; paleness of face; small, intermitting pulse.

China, anæmic state; singing, ringing in the ears; great paleness of face, and fainting.

Crocus, black, viscid blood, with cold sweat on forehead.

Erigeron, congestion of the head; febrile action; red face.

Hamamelis, in combination with hæmoptysis.

Merc. sol., blood coagulates in the nose, and hangs down like icicles.

Moschus, with all the signs of depletion; spasmodic jerking of the muscles.

Nux v., congestion to the head; pain in forehead; constipation; suppressed hemorrhoidal flow.

Puls., vicarious menstruation.

Rhus t., at night; during stool; from bending forward, and any bodily exertion.

Secale, anæmic state, either from exhaustive diseases or artificial depletion.

Thlaspi bursa pastoris is recommended by Bönninghausen as one of the most efficient remedies, but without special indications.

Trillium pendulum, passive hemorrhage.

Veratrum alb., deadly paleness of face; coldness of body; slow, intermitting pulse.

FACE.

The face of a patient tells a long story, and it will be well for the student to observe closely its features, expression, color and temperature. The experienced physician reads out of it not only the degree of severity of an attack, but often also its whole general nature. But that must be learned by practice. There are shades so fine that they could not be well described, but which nevertheless stamp upon the whole a peculiar character.

1. *The aspect of the face.*

a. A delicate appearance, with long-fringed eyelashes, often serves to point out the tubercular diathesis.

b. The thickened alæ of the nose and upper lip of scrofula are most marked in childhood.

c. The pallor of anæmia is very important; it is waxy in chlorosis and pasty in diseases of the kidneys.

d. A puffy appearance about the eyelids along with anæmia is very generally an indication of albuminuria.

e. A bloated, blotchy face generally indicates irregular habits of living.

f. The features undergo remarkable changes in erysipelas, parotitis, facial paralysis, &c.

g. A sunken face indicates exhaustion, either from too great exertion, or loss of sleep, want of nourishment, or profuse diarrhœa, or disturbed digestion. If it sets in suddenly during pregnancy, it is a premonitory sign of abortus. If you find it in the incipiency of a disease, without previous weakening causes, it denotes a severe illness. If it sets in suddenly, during a disease, without chill or spasm, by which it might be caused, it is a sign of extreme exhaustion or metastasis, mortification, or apoplexia nervosa.

h. The hippocratic face is characterized in the following way:

The skin upon the forehead is tense, dry, or covered with cold perspiration; the temporal regions are sunken in; the eyelids are pale, and hang down; eyes are dull, without lustre, turned upwards, and sunken; the alæ nasi are pinched together, and the nose is very pointed; the molar bones stick out, and the cheeks are sunken in and wrinkled; the ears appear to be drawn in, and are cold; the lips are pale, livid; the lower jaw sinks down, and the mouth is open. It is always a sign of extreme prostration of vital power, and is found in cholera, in mortification, and during death-struggle.

i. A wrinkled face is natural to old age, but in children it is a sign of imperfect nutrition, and is found in consequence of exhausting diarrhœa and atrophy. In boys and half-grown lads a wrinkled face, without loss of appetite or sleep, is a sign of onanism, or other bad habits. Such a young, old, and wrinkled face is a pitiful sight.

The linea ophthalmica zygomatica is a line or fold, commencing at the inner canthus of the eye, running towards the zygoma where it ends. It shows momentarily, when children cry, but becomes more permanent in children with affections of the brain. Its appearance in simple catarrh is said to indicate the setting in of hooping-cough.

The linea nasalis is a line or fold, which commences *at the upper part of the alæ of the nose, and runs towards the orbicularis oris*, (the sphyncter of the mouth,) forming a more or less perfect half-circle.

This line, if found in children, denotes abdominal diseases, especially inflammation of the bowels, also rhachitis, scrofula and atrophy. In grown persons it is said to have been observed as a concomitant symptom of albuminuria, ulcer and cancer of the stomach, and degeneration of the liver.

The linea labialis is a line or fold, which commences at *the corner of the mouth and runs down towards the side of the chin, where it ends*, and whereby the chin appears to be elongated. This line is said to be a characteristic sign in children of inflammatory diseases of the larynx and lungs. Very marked it has been found in grown persons who suffered with ulceration of the larynx and bronchial affections, attended with difficulty in breathing and much mucous discharge.

k. The risus sardonicus, a spasmodic distortion of the face, which resembles a kind of laughing, is found in irritation and inflammation of the brain, in inflammation of the pericardium and diaphragm, in irritation of the intestinal canal, in abnormal conditions of the menses, even after mental excitement, fright and depression of spirits.

2. *The expression of the face* is, in health, the reflex of the mind; and in disease it has a distinct reference to the nervous system.

In general, I may say:

a. A rigid, staring, stupid, troubled, but sometimes also a smiling countenance, is found in affections of the brain, and in typhoid conditions;

b. An anxious, sad, and restless expression is found in lung and heart diseases; and

c. A morose, long-faced, apathetic expression is found in abdominal disorders.

3. *The color of the face.*

a. Redness, if habitual, denotes a tendency to gout and hemorrhoids; and is a sign of indulgence in good-living and alcoholic liquors.

Flying, often changing redness is seen in children during dentition, in women before menstruation, or after conception, and is also found in inflammation of the lungs.

Bright, vivid redness is found in nervous diseases, hysteria and tendency to hemorrhages.

Dark, purplish redness is found in congestive, apoplectic and suffocative conditions.

Redness, coming and going in spots, I have often found in brain diseases of little children.

One-sided redness, with paleness and coldness of the other side, in encephalitis, is, according to Schönlein, a sign of the formation of pus in that half of the brain which corresponds to the red side of the face. It is found also in diseases of the lungs, heart and abdomen.

The circumscribed hectic flush is characteristic of phthisis.

Redness of the cheeks, with a white ring around the alæ of the nose and the mouth, are frequently met with in different fevers, and is a sign of pretty severe illness.

b. Paleness.

Sudden paleness, especially *around the mouth*, is found in children with colicky spasms in the abdomen.

Great paleness, alternating with flushes of redness, is found in inflammation of the lungs and brain; also during dentition.

A pale, peculiar white and wrinkled face is found in children with chronic hydrocephalus.

A sudden paleness, after an inconsiderable limping, in children, combined with great lassitude, is a sign of a lingering hip-disease.

In *women*, *paleness* is a sign of profuse or suppressed menstruation or chlorosis.

Sudden paleness during pregnancy prognosticates threatening metrorrhagia, or abortion, or the dying of the fœtus.

Sudden paleness about the nose is in scarlet fever a bad sign; it denotes a metastasis to the brain; during the pealing-off period it is a forerunner to dropsy.

Sudden paleness after a fall indicates concussion of the brain.

Pale lips are characteristic of chlorosis.

c. Blue color of the face

Is found in organic diseases of the heart, especially in dilatation of the ventricles and disorganizations of the valves, whereby the oxygenation of the blood is interfered with. In the highest degree it exists in *cyanosis*, a state in which, consequent upon structural faults in the heart, the venous and arterial blood becomes mixed. In new-born children, therefore, if it is lasting, it is a sign of such malformation; if it, however, soon passes off, it may have been caused by hard labor-pains, face-presentation, or by the navel string being wound around the neck of the child.

We meet it likewise in consequence of strangulation or suffocation.

d. Livid, grayish, lead-colored face denotes deep-seated organic diseases, scirrhus, gangrene.

e. Yellowish color of the face is found mostly in diseases of the liver.

The yellowness of jaundice varies from a pale orange to a deep-green yellow.

There is a certain yellowness of a malignant aspect, which is distinguished from jaundice by the pearly lustre of the eyes.

f. Brown spots in women are mostly signs of pregnancy, or irregularity in menstruation; they are also said to be found in liver complaints.

Irregular brownish spots, a little raised above the skin and covered with small pustules, which sometimes discharge a bloody fluid, are in children a sign of congenital syphilis.

Fat, short, and broad persons, with dark-brown or black hair, dark eyes, yellow-brownish, dark color of the skin, are mostly affected on the right side with liver complaints and so on.

g. Telangiectasia on the face, especially on the upper parts of the cheeks and on the lower eyelids, are almost always connected with some obstruction or stasis; often in the chest, but more frequently in the abdomen, and a diminution of chlorides in the urine.

Telangiectasia if ever so small, on the right side of the face,

denote an obstruction in one of the organs on the right side; and if on the left, a stasis in one of the organs on the left side.

Bright-red telangiectasia denote an *arterial*, whilst *purplish-looking* indicate *a venous, obstruction*, either in the chest or abdomen of the corresponding side.

Small varices on the left side of the nose, or lips, or glans penis, indicate a venous obstruction in the heart or kidney.

So also are *ringworms* almost always indicative of some kidney affections.

4. *The temperature of the face.*

a. Heat of the face is found in congestion of the head. in fevers, in inflammatory conditions, in coryza, and in other complaints.

b. Coldness of the face we find in chills, in spasms, exhaustion, in sickness of the stomach, in syncope.

A deadly coldness in cholera; also in violent hysterical paroxysms.

In inflammation of the lungs, coldness of the face denotes the commencement of suppuration.

Sudden coldness of the face in scarlet fever portends death.

Special Forms of Diseases of the Face.

Erysipelas of the Face.

Compare Erysipelas of the Scalp. All which is said there is equally applicable here. (P 30)

Crusta Lactea, *Milk Crust.*

This is a disease of nursing infants. The eruption usually commences as a patch of slightly-raised pimples. The patch itches, increases in size, and becomes more inflamed in consequence of being constantly rubbed; the cuticle is raised in more or less defined vesicles, which are usually broken by friction; the surface becomes excoriated, somewhat swollen, pouring out an ichorous secretion.

With the increase of irritation, the patch spreads. In case the eruption commences in several patches, they are liable to run into one. Thus the disease increases; the secretion, from being a transparent and colorless ichor, becomes opaque, milky; then yellowish, and at last purulent; while small pustules are developed on the red and tumefied skin around the patch. For this reason it has been called *Impetigo.* The forming crusts now grow thicker, and have the appearance of dried honey. Not unfrequently, as a consequence of pressure or friction, blood is mingled with the discharges, and the

crusts become colored of various hues, from a lightish-brown to positive black.

Although commencing on and being confined most frequently to the forehead and cheeks of the child, this obstinate disease may attack the whole body, being a source of great suffering to the child and annoyance to the mother.

Should the eruption continue even after the milk teeth are all cut, no new light of prophecy need beam upon the little patient, according to Wilson: "When puberty arrives, then certainly the disease will go." For, although there are cases of pretty tolerable stubbornness, yet I have not seen a case yet which did not yield to a judicious Homœopathic treatment in a reasonable space of time.

Therapeutic Hints.

Arsen., pimples and vesicles; acrid discharge; itching; burning; worse at night, in cold air; better from external warmth.

Bell., teething, jerking in sleep; want to sleep yet inability to go to sleep.

Calc. c., children fair and plump; teething; scrofulous habit; worse about new moon; burning after washing; perspiration after eating or drinking.

Lycop., thick crusts, underneath, cracked surface; skin dry; excoriated places; worse at night and in warmth.

Rhus t., acrid inflamed look; swollen glands on neck and throat; stiffness of the neck.

Sulphur, excoriations, pimples, vesicles; violent itching; worse at night; bleeding from scratching; diarrhœa in the morning.

Comedones, Acne Punctata and Rosacea,

Diseased sebaceous glands; compare the Chapter on the *Nose.*

Lupus,

Which attacks oftenest the nose, may appear also on any other part of the face; see Ibidem.

Hydroa, Herpes Labialis, *Fever-blisters.*

By hydroa is understood an eruption of clusters of globular vesicles upon inflamed patches of an irregular or circular form upon the lips, sometimes affecting only the mucous membrane of the prolabium, at other times the integument alone, and again, both simultaneously. It extends a variable distance around the mouth, and sometimes covers,

like pearls, the whole upper lip. After a few days the lymph of the vesicles becomes turbid, and on the fifth or sixth day forms a brownish crust, from the desiccation of the vesicles and their contents. This eruption is found most frequently in feverish conditions, especially in intermittent and rheumatic fevers, in pneumonia and catarrh, but scarcely ever in typhus.

It never calls for treatment, but its presence on the upper lip, covering, like pearls, its whole surface, in intermittent fevers, points especially to Natr. mur.

Syphilitic Eruptions

Have their seat especially on the forehead; and appear in the form of maculæ, pustules or tubercles; all of a reddish brown or copperish color.

The Cancer of the Lower Lip.

This affection generally develops itself on the prolabium and adjoining mucous membrane, seldom on the adjoining integument of the lip. At first appear little round, hard lumps, which gradually grow and join in one mass, mostly of the size of a pea—scarcely larger than a walnut. By-and-by the skin becomes a dark purple color, and finally the tumor breaks, but does not show any cavity, and appears like a dark-red sore with a dirty-whitish, thin secretion. In its further progress the borders of the sore become raised, the sore surface cracks and upon it grow cauliflower excrescences. The lymphatic glands of the lower jaw and under the tongue become soon involved in the morbid process. At first they merely swell and are movable, but later they grow fast to the submaxillary bone.

Therapeutic Hints.—Arsen., Con., Lach., Phos., Sepia, Silic., Sulphur.

The Flat Cancer of the Face

Develops itself at the nose, at the corners of the eyes, on the cheeks and forehead, and commences as very small, round tumors in the skin close to each other, forming ridges of from one to two lines in thickness. These ridges cover themselves with little yellow scabs, which, if removed, leave a raw surface, raised scarcely any above the skin and showing a great similarity to a common sore. It differs, however, from a common ulcerating sore by its hardness and callous edges, its want of healthy granulation, and any sign of a healing process, and its tendency to spread in circumference but not in depth.

Therapeutic Hints.—Ars., Caust.

Spasmodic and Paralytic Affections of the Face.

The mimic spasm of the face (spasmus facialis) is an affection of the nervus facialis, and manifests itself in a continuous or intermitting contortion of one side, seldom both sides, of the face.

The spasm of the masseter, which is an affection of a branch of the trigeminus—the masseteric nerve—is either a *tonic spasm*, constituting what is commonly called *lockjaw, trismus*, or a *clonic spasm*, manifesting itself by a *chattering* or *gnashing of teeth.*

Lockjaw is most commonly known as a consequence of wounds, and may also be caused by brain affections.

The chattering of teeth is found during violent chills or after great fright; and

The gnashing or grating of teeth is either a brain symptom, or a reflex action from abdominal irritation.

Therapeutic Hints.

Lockjaw, **Angustura,** after external injury; jerking in the dorsal muscles.

Bellad., after taking cold, with great pain in the lower jaw. Compare **Lycop., Merc., Camph., Hyosc., Ign.**

Spasms of the face, compare **Bell., Graph., Valer.**

Paralysis of the face generally attacks only one side, and is caused by either diseases of the brain, (apoplexy, abscesses, softening, or pseudo-formations,) when it is mostly combined with paralysis of the tongue and extremities—*central irritation*—or by diseases of the petrous portion of the temporal bone, caries or external injuries, or tumefactions, or scirrhous swellings of the parotid glands—*peripheric irritations.*

The paralytic side of the face appears flatter, longer, drawn down, motionless. When both sides are paralyzed, the whole face is smooth and motionless like a mask.

If the *masseteric branch* of the trigeminus is affected, this paralytic state manifests itself in an inability to chew; the cheek of the affected side sinks in, and the lower jaw stands crooked during the act of mastication. This paralysis may be either a brain symptom or the consequence of local diseases of the corresponding nerves.

Therapeutic Hints. — Compare **Bellad., Caust.,** right side; **Cocculus, Graphites,** left side; **Nux v., Opium.**

Prosopalgia, *Neuralgia of the Face,*

Means a pain in the facial nerves, which may be caused by a diseased inflammatory condition of the nerves; by cerebral disturbances; by disturbances of neighboring organs; by conditions we know little about, so-called purely nervous affections. As this complaint is quite frequently met with, and of a most painful nature, and as, in most cases, it speedily and entirely yields to Homœopathic treatment, when the old school treatment has entirely failed to give relief or even made the trouble worse, I shall annex the following:

Therapeutic Hints.—Compare chapter on *Nerves.*

Aconit., left side, cheek hot and red; the patient is beside himself· rolling about in bed or on the floor, and screaming.

Arsen., periodic; great restlessness, exhaustion; better from external heat.

Arg. nitr., during the paroxysm an unpleasant, sour taste in the mouth.

Belladonna, mostly right side; paleness or redness of the face; convulsive motions of the muscles of the face during the height of the paroxysm.

Bism. nitr., amelioration from constant running about and taking cold water in the mouth.

Cact. grand., right side; chronic; worse from slightest exertion, tolerable only when lying still in bed; brought on by wine, music, or strong light, or missing dinner at the usual hour.

Calc. c., chronic; in fat persons; profuse catamenia; soft stools; cold damp feet.

Caust., right side; worse at night; chilly; no thirst; scanty menses

Cham., hot, red face, perspiring; or one cheek red and the other pale; crying; irritable mood.

China, right side; worse from slightest touch.

Chin. sulph., paroxysms at regular hours; better from external heat and tying up the head.

Coffea, pain is unbearable; the pains extend down to the arms and even fingers' ends; patients loquacious, inordinately complaining; beside themselves.

Ferrum carb., during the paroxysm the face is fiery red, with glistening eyes; afterwards earthy-looking; head in constant motion.

Gelseminum, contractions and twitchings of the muscles near the

parts affected; great nervousness and loss of control over the voluntary muscles, giving rise to odd, irregular motions.

Hepar, especially right side, after Bell., previous abuse of Mercury; brought on by cold west winds.

Natr. mur., periodic paroxysms; great thirst; yellowish pale and livid complexion; suppressed intermittent fevers.

Nux v., sometimes periodic; the eye of the affected side is injected, painful, with lachrymation; earthy complexion.

Pulsat., easily crying; worse in the evening, worse in the warm room; better in the fresh air; looseness of bowels; scanty or suppressed menses.

Sepia, yellow saddle across the nose.

Silicea, itching and dryness in the nose, frontal sinuses and antrum, Highmorianum; affection of the periosteum in these parts.

Spigelia, especially left side; cheek dark-red; eye watery; palpitation of the heart.

Stannum, the pain increases steadily to a certain height, when it gradually decreases again just as steadily; after suppressed intermittent fevers by quinine.

Stramon., delirious talk, with eyes open; frowning with forehead; risus sardonicus.

Sulphur, often when all remedies fail; deep-seated psoric diathesis; painful, scanty menstruation, insufficient hard stools, sleepless nights, etc.

Thuya, right side; after suppression of eczema on the auricle; numb feeling in the parts affected after the pain ceases.

Veratr., bluish paleness of face, sunken countenance, coldness of limbs, cold perspiration, vomiting, prostration.

Verbasc., daily from 9 A. M. to 4 P. M.; brought on by talking, sneezing, and made worse from pressure upon the affected parts.

MOUTH.

1. *Its external parts.*

The lips we have had to notice on several occasions, as parts of the face.

Their *paleness* denotes poverty of blood; a *transient paleness*, however, is found in chills, spasms, fainting fits and frights.

Their *redness* is a healthy condition; but an *increased, deeper* or

brighter redness is found in feverish conditions. A higher redness of the lower lip, without apparent fever, indicates *Sulphur.*

Bluish lips are seen in all such conditions, where a free circulation of blood is interfered with.

Dry lips are found in all acute, feverish or inflammatory conditions.

Brownish or even *blackish crusts* form in typhoid states.

Fever-blisters, hydroa, are found on the lips very often in intermitting fevers and pneumonia, scarcely ever, however, in typhus; and lastly, *the cancer of the lip,* a malignant growth, appears mostly at the prolabium, rarely at the adjoining integument of the lip.

The *mouth is kept open* in stoppage of the nose, difficulty of breathing, great interior heat, hardness of hearing. In fevers it is a sign of great exhaustion—the lower jaw falling down, especially during slumber. This symptom very frequently indicates *Lycop.*

The *mouth is spasmodically closed* in lock-jaw and other spasmodic affections.

2. *The interior cavity of the mouth.* We shall examine it under the following heads: Gums, teeth, tongue, salivary glands and their ducts, tonsils, uvula, soft palate, fauces, and mucous membrane of the mouth and fauces.

The Gums

Present different aspects. They are *pale* in anæmia, from the abuse of iron and mercury, and in spasmodic conditions; *blue* in cyanosis and scurvy; *brown* and *blackish,* coated with tough mucus in typhoid conditions; *a bluish, grayish, slate-colored stripe or line* on the gums is a sign of lead-poisoning; *a purple line* is found in old age, and *a pink line,* especially on the gums of the lower jaw by paleness of the remaining gums, is often met with in phthisical persons.

Swelling of the gums is either of a *congestive* and *inflammatory* nature —in toothache, parulis—or of an œdematous and *spongy* nature, (in scurvy, mercurial affections, noma, stomatitis.) In such conditions the gums generally *bleed* easily when being cleansed, or only slightly touched.

Bleeding gums are said to have been observed also from suppressed menstrual or hemorrhoidal bleedings—vicarious bleeding.

Ulcerated gums may originate from diseased states of the teeth, from general maladies or from constitutional maladies, such as scurvy, syphilis, mercurial poisoning, noma, stomatitis.

The *special diseases of the gums* are:

Parulis, *Gumboil, Inflammatory Swelling of the Gums.*

This generally takes its origin in a diseased tooth, but may appear without any known cause. Its seat is almost always on the gums, covering the external side of the alveolar processes, and may reach to such a height as to swell up the cheek and corresponding side of the face, making chewing and talking a very difficult operation. It almost always ends in the formation of an abscess, which breaks and discharges.

Therapeutic Hints.—Hepar, Silicea.

Epulis, *a kind of Fungoid Growth on the Gums.*

This originates either in the gums, periosteum, or on the maxillary bone. When it begins in the gums or periosteum there is a reddish or bluish-red, hard and painless swelling of a roundish or oval shape growing out of the alveolar process or between the teeth. It is somewhat movable if it rests upon a broad pedicle; generally, however, it has none, and shows no distinct boundaries. In its further progress it assumes the form of an irregular, fleshy lump, which, growing larger, overlaps one or more teeth; the adjoining teeth are pressed out of their position, and grow crooked or fall out. The swelling soon bursts through the mucous membrane, by which it has been covered, and presents a tuberous, grayish-red mass, which is either an entire mass or is split into different, irregular lobes by deep crevices. It bleeds easily, and, by sloughing, pieces of it fall off, forming cavities, which secrete a most offensive ichorous discharge.

When it starts from the maxillary bone, we observe at first a swelling of the bone, then the teeth fall out, and at last the morbid growth bursts forth.

In some cases it has its seat in the antrum Highmorianum.

Therapeutic Hints.—Calc. c., Cham., Natr. m., Thuya.

Fistula of the Teeth.

In consequence of inflammation of the periosteum lining the root of the teeth, and its consequent suppuration, or caries of the root and alveolar processes, there forms gradually a channel, which opens either on the inside of the mouth or outside of the face, which discharges a morbid secretion, and forms on its outlet hard, callous edges. This is called *a fistula dentalis.*

Therapeutic Hints.—Compare Askalabotes, Calc. c., **Causticum,** Ratanhia, **Silic.,** Sulphur.

The Teeth.

The period of the first dentition, developing the *temporary* or *milk-teeth*, is frequently attended with quite severe ailments of the child. It is especially during this period that we find children attacked by brain diseases, bronchitis, and pneumonia, and especially catarrhal affections of the intestinal canal. How is this? Can such a comparatively small irritation, as of necessity must be combined with the teeth piercing through the gums, cause all such mischief? Or is it not rather one of those common mistakes, where a thing is supposed to be the cause of another thing, because it is found simultaneously with the same? May not it and the other have both a still deeper, yet common cause? And this cause is *the development of the brain, which at that time is greater and more rapid than at any other period of life*, lasting to the seventh year of life. The soft tissue of the brain grows denser, and the distinction between its *cortical* and *medullary*, or *gray and white substance*, becomes more marked, whilst the yellowish substance, which had formed a line of demarcation between them, gradually fades away. The brain of infants is, compared with the remaining body, very voluminous; being in the proportion of 1 : 8, whilst in adults it is in the proportion of 1 : 40 or 50. And still it grows on rapidly up to the seventh year, so that the brain of an infant, which weighs at its birth, say three-quarters of a pound, weighs in its second year nearly one pound and a half, until up to the seventh year it attains a weight of two pounds and a half and more. (Burdach.) It is clear, that such great and marked changes in the central organ may naturally be attended by a liability to disturbances in its own sphere and other peripheric organs, and this is the reason why the period of dentition, which is in itself only the result of this interior development of the brain, is attended by so manifold and serious disturbances. I hope this will be sufficient to prove the absurdity of the practice of *lancing the gums* during infancy.

The teeth become *loose* from mercurial poisoning, in scurvy and syphilitic affections.

The *decay* of the teeth is ascribed to microscopic parasites, and to a want of silicea in the system.

Odontalgia, *Toothache.*

Toothache has many causes: decay of the teeth and exposure of the nerve; various affections of different organs of the body; taking

cold, &c. The best treatise on this painful affection, the curing of which has won many a friend to Homœopathy, is that of Dr. Hering in his Domestic Physician. With the kind permission of its author, I shall insert it here:

Most in the Front-teeth.—Belladonna, Causticum, Carbo vegetabilis, Chamomilla, China, Coffea, Ignatia, Mercurius, *Natrum muriaticum*, *Nux moschata*, *Nux vomica*, Phosphorus, Phosphoric acid, *Rhus*, Silicea, Staphisagria, *Sulphur*.

Most in the Eye and Stomach-teeth.—Aconite, Calcarea, Hyoscyamus, *Rhus*, Staphisagria.

Most in the Molars or Back-teeth.—Arnica, Belladonna, *Bryonia*, Calcarea, *Carbo vegetabilis*, Causticum, Chamomilla, China, Coffea, Hyoscyamus, Ignatia, Mercurius, Nux moschata, Nux vomica, *Phosphorus*, Phosphoric acid, Pulsatilla, Rhus, Silicea, *Staphisagria*, Sulphur.

Most in the Upper-teeth.—*Belladonna*, Bryonia, *Calcarea*, *Carbo vegetabilis*, *China*, *Natrum muriaticum*, *Phosphorus*.

Most in the Lower-teeth.—*Arnica*, *Belladonna*, Bryonia, Carbo vegetabilis, *Causticum*, *Chamomilla*, China, Hyoscyamus, Ignatia, Mercurius, Nux vomica, Phosphorus, Pulsatilla, *Rhus*, *Silicea*, *Staphisagria*.

One-sided.—Aconite, Belladonna, Chamomilla, Mercurius, Nux vomica, Pulsatilla.

On the Left side.—Aconite, Apium virus, Arnica, Carbo vegetabilis, Causticum, *Chamomilla*, China, Hyoscyamus, Mercurius, *Nux moschata*, *Phosphorus*, Rhus, Silicea, *Sulphur*.

On the Right side.—*Belladonna*, Bryonia, Calcarea, Coffea, Lachesis, Natrum muriaticum, Nux vomica, Phosphoric acid, Staphisagria.

A whole Row of Teeth.—Chamomilla, Mercurius, Rhus, Staphisagria.

In Hollow Teeth.—*Antimonium crudum*, *Belladonna*, Bryonia, *Calcarea*, Carbo vegetabilis, Causticum, *Chamomilla*, China, Coffea, Hepar, *Hyoscyamus*, *Lachesis*, *Mercurius*, Nux moschata, Nux vomica, Phosphorus, Phosphoric acid, *Pulsatilla*, *Rhus*, Silicea, *Staphisagria*, Sulphur.

In the Gums.—Antimonium crudum, Arnica, *Belladonna*, Bryonia, *Calcarea*, *Carbo vegetabilis*, Chamomilla, China, Hepar, Hyoscyamus, Lachesis, *Mercurius*, *Natrum muriaticum*, Nux moschata, *Nux vomica*, Phosphorus, Phosphoric acid, Pulsatilla, Rhus, Silicea, *Staphisagria*, Sulphur.

——— **Upper.**—Belladonna, *Calcarea*, Natrum muriaticum.

——— **Lower.**—Causticum, Phosphorus, *Staphisagria*, Sulphur.

——— **Interior of.**—Arnica, Natrum muriaticum, Phosphoric acid, Pulsatilla, Rhus, *Staphisagria*.

——— **Swollen.**—Aconite, Belladonna, Calcarea, Chamomilla, Carbo vegetabilis, Causticum, China, Hepar, Lachesis, Nux vomica, Natrum muriaticum, Phosphorus, Pulsatilla, Rhus, Sulphur.

——— **Painful.**—Apium virus, Arsenicum, Calcarea, Carbo vegetabilis, Causticum, Lachesis, Mercurius, Nux moschata, Nux vomica, Phosphorus, Staphisagria, Sulphur.

——— **Bleeding.**—Belladonna, Calcarea, Carbo vegetabilis, Causticum, Lachesis, Mercurius, Nux moschata, Nux vomica, Phosphorus, Staphisagria, Sulphur.

——— **Ulcerated.**—Belladonna, Calcarea, Carbo vegetabilis, Causticum, Hepar, Lachesis, Mercurius, Natrum muriaticum, Nux vomica, Phosphorus, Staphisagria, Silicea.

Pressing.—Aconite, *Arnica*, Bryonia, Carbo vegetabilis, Causticum, China, Hyoscyamus, Ignatia, Natrum muriaticum, Nux moschata, Nux vomica, Phosphorus, *Rhus*, Silicea, *Staphisagria*, Sulphur.

——— **Inwards.**—Rhus, Staphisagria.

——— **Outward.**—Phosphorus.

——— **Asunder.**—Phosphoric acid.

——— **As if from Congestion of the Blood, as if the teeth were too close.**—Aconite, Arnica, Belladonna, Chamomilla, Calcarea, China, *Coffea*, Hepar, Hyoscyamus, *Nux vomica*, *Pulsatilla*.

As if pulled out or wrenched.—Arnica, Causticum, Nux moschata, Nux vomica, Phosphoric acid, Rhus.

Too Long.—Arnica, Arsenicum, Belladonna, *Bryonia*, Calcarea, Carbo vegetabilis, *Causticum*, Chamomilla, Lachesis, Hyoscyamus, Natrum muriaticum, Nux vomica, Rhus, Silicea, *Sulphur*.

Loose.—Arnica, Arsenicum, Bryonia, Carbo vegetabilis, Causticum, Chamomilla, China, Hepar, *Hyoscyamus*, Ignatia, Mercurius, Natrum muriaticum, Nux moschata, Nux vomica, Phosphorus, Pulsatilla, Rhus, Staphisagria, Sulphur.

As if too Loose.—Arsenicum, Bryonia, *Hyoscyamus*, Mercurius, Rhus.

Blunt.—Aconite, China, Dulcamara, Ignatia, Lachesis, Natrum muriaticum, Mercurius, *Nux moschata*, Phosphorus, Phosphoric acid, *Pulsatilla*, Silicea, Staphisagria, Sulphur.

Sore, Bruised.—Arnica, Arsenicum, Belladonna, Bryonia, Calcarea, Carbo vegetabilis, Causticum, *Ignatia*, Natrum muriaticum, Nux vomica, Phosphorus, *Pulsatilla*, *Rhus*.

Burning.—Chamomilla, Mercurius, Natrum muriaticum, Nux vomica, Phosphorus, Pulsatilla, Rhus, Silicea, Sulphur.

Gnawing, Scraping.—Chamomilla, Nux vomica, Rhus, Staphisagria.

Digging.—Antimonium crudum, Bryonia, Calcarea, China, Ignatia.

Boring.—Belladonna, Calcarea, Lachesis, Mercurius, Natrum muriaticum, *Nux vomica*, Phosphorus, Phosphoric acid, *Silicea*, *Sulphur*.

Jerking, Twitching.—Apium virus, Antimonium crudum, Arsenicum, Bryonia, Belladonna, Calcarea, Causticum, Cepa, Chamomilla, Coffea, Hepar, Hyoscyamus, Lachesis, *Mercurius*, *Nux vomica*, *Pulsatilla*, *Rhus*, *Sulphur*.

Drawing, Tearing.—Antimonium crudum, Belladonna, Bryonia, Carbo vegetabilis, Calcarea, Cepa, Chamomilla, China, Glonoine, Hyoscyamus, Lachesis, Mercurius, Nux vomica, Phosphoric acid, Rhus, Staphisagria.

Cutting, Piercing.—Aconite, Antimonium crudum, Belladonna, *Bryonia*, Calcarea, Causticum, *Chamomilla*, *China*, Lachesis, *Mercurius*, Nux vomica, Nux moschata, Phosphorus, Phosphoric acid, *Pulsatilla*, Rhus, Silicea, Staphisagria.

Beating, Pulsating.—*Aconite*, Arnica, Arsenicum, *Belladonna*, Calcarea, Causticum, Chamomilla, China, Coffea, Glonoine, *Hyoscyamus*, Lachesis, Mercurius, Natrum muriaticum, Phosphorus, Pulsatilla, Rhus, *Staphisagria*, Sulphur.

Intermittent.—Belladonna, Bryonia, Chamomilla, Coffea, Calcarea, China, Mercurius, Nux vomica, Pulsatilla, Rhus, Silicea, Staphisagria, Sulphur.

Constant, day and night.—Belladonna, Calcarea, Causticum, Natrum muriaticum, Silicea, Sulphur.

During the day only, better in the night.—Mercurius.

———————, none in the night.—Calcarea, Belladonna, Mercurius, Nux vomica.

———, worse in bed.—Antimonium crudum, Mercurius.

Worse in the night.—Aconitum, Antimonium crudum, Arsenicum, *Belladonna*, Bryonia, *Carbo vegetabilis*, *Chamomilla*, China, Coffea, Hepar, Hyoscyamus, Mercurius, Natrum muriaticum, Nux moschata, Nux vomica, Phosphorus, Phosphoric acid, *Pulsatilla*, *Rhus*, Silicea, *Staphisagria*, *Sulphur*.

By night only, not during the day.—Phosphorus.

Most before midnight.—Bryonia, *Chamomilla*, China, Natrum muriaticum, Rhus, Sulphur

——— after ———.—Arsenicum, Belladonna, Bryonia, Carbo vegetabilis, Chamomilla, China, *Mercurius*, Natrum muriaticum, Pulsatilla, Phosphorus, Rhus, *Staphisagria*, Sulphur.

When awaking.—Belladonna, Carbo vegetabilis, Lachesis, Nux vomica. (See Sleep.)

In the morning.—Arsenicum, Belladonna, Bryonia, Causticum, Carbo vegetabilis, China, *Hyoscyamus*, Ignatia, Natrum muriaticum, *Nux vomica*, Phosphorus, Phosphoric acid, Pulsatilla, *Rhus*, *Staphisagria*, Sulphur.

At noon.—Cocculus, Rhus.

Afternoon.—Calcarea, Causticum, Mercurius, *Nux vomica*, Phosphorus, *Pulsatilla*, Sulphur.

Towards evening.—Pulsatilla.

At night.—Antimonium crudum, *Belladonna*, Bryonia, Calcarea, Causticum, Hepar, *Hyoscyamus*, Ignatia, *Mercurius*, Nux moschata, Nux vomica, *Phosphorus*, *Pulsatilla*, *Rhus*, Staphisagria, *Sulphur*.

Every other day.—China, Natrum muriaticum.

Every seventh day.—Arsenicum, Phosphorus, Sulphur.

In Spring.—Aconitum, Belladonna, Bryonia, Calcarea, Carbo vegetabilis, Dulcamara, Lachesis, Natrum muriaticum, Nux vomica, *Pulsatilla*, Rhus, Silicea, Sulphur.

In Summer.—Antimonium crudum, Belladonna, Bryonia, Calcarea, Carbo vegetabilis, Chamomilla, Lachesis, Natrum muriaticum, Nux vomica, Pulsatilla.

In Autumn.—Bryonia, China, Mercurius, Nux vomica, Nux moschata, Rhus.

In Winter.—Aconitum, Arsenicum, Belladonna, Bryonia, Calcarea, Carbo vegetabilis, Causticum, Chamomilla, Dulcamara, Hepar, Hyoscyamus, Ignatia, Mercurius, Nux moschata, *Nux vomica*, Phosphorus, Phosphoric acid, Pulsatilla, *Rhus*, Silicea, Sulphur.

Caused by Damp night-air.—Nux moschata.

——— Damp-air.—Mercurius.

——— Cold damp weather.—Nux moschata, Cepa, Rhus.

——— Wind.—Aconitum, Pulsatilla, Rhus, Silicea.

——— Draught.—Belladonna, Calcarea, *China*, Sulphur.

Taking Cold.—Aconitum, *Belladonna*, *Bryonia*, Calcarea, Causticum, Chamomilla, China, Coffea, *Dulcamara*, Ignatia, *Hyoscyamus*, *Mercurius Nux vomica*, *Nux moschata*, *Phosphorus*, *Pulsatilla*, *Rhus*, Staphisagria, Sulphur.

Taking Cold, when overheated.—Glonoine, Rhus.

———, **by getting wet.**—Belladonna, Calcarea, Causticum, Hepar, Lachesis, Nux moschata, Phosphorus, Pulsatilla, Rhus, Sulphur.

Suppressed Perspiration.—Chamomilla, Rhus.

Getting worse from Cold air.—Belladonna, Calcarea, Hyoscyamus, Mercurius, Nux moschata, Nux vomica, Silicea, Staphisagria, Sulphur.

——— **in the mouth.**—Aconitum, *Belladonna*, Bryonia, Calcarea, Causticum, Hyoscyamus, *Mercurius*, Nux moschata, Nux vomica, Phosphorus, Pulsatilla, Silicea, Staphisagria, Sulphur.

——— **Opening of the mouth.**—Bryonia, Chamomilla, Causticum, Hepar, Nux vomica, Phosphorus, Pulsatilla.

——— **Breathing.**—Pulsatilla.

——— **Drawing air into the Mouth.**—*Antimonium crudum*, Belladonna, Bryonia, Calcarea, Causticum, Hepar, Mercurius, Natrum muriaticum, Nux moschata, Phosphorus, Silicea, Staphisagria, Sulphur.

——— **Cold washing.**—Antimonium crudum, Bryonia, *Calcarea*, Chamomilla, *Mercurius*, *Nux moschata*, Nux vomica, Pulsatilla, Rhus, Silicea, Staphisagria, Sulphur.

——— **Eating cold things.**—Bryonia, Calcarea, Chamomilla, Nux vomica, Pulsatilla, Rhus, Staphisagria, Sulphur.

——— **Drinking cold things.**—Bryonia, Calcarea, Chamomilla, Causticum, Hepar, Lachesis, Mercurius, Natrum muriaticum, Nux moschata, *Nux vomica*, Pulsatilla, Silicea, Staphisagria, Sulphur.

——— **Rinsing of the Mouth with Cold Water.**—Sulphur.

——— **Cold in general.**—*Arsenicum*, Antimonium crudum, Calcarea, Carbo vegetabilis, Mercurius, Natrum muriaticum, Nux moschata, Nux vomica, *Pulsatilla*, Phosphoric acid, *Rhus*, Silicea, Staphisagria, Sulphur.

In the open air.—*Belladonna*, Calcarea, Causticum, *Chamomilla*, *China*, Hyoscyamus, Mercurius, *Nux moschata*, *Nux vomica*, *Phosphorus*, Pulsatilla, *Rhus*, *Staphisagria*, Sulphur.

——— **Staying.**—Belladonna, Bryonia, Chamomilla, Hyoscyamus, Mercurius, Nux vomica, Phosphoric acid, Staphisagria, Sulphur.

——— **Walking.**—Nux vomica, Phosphorus, *Staphisagria*.

In a Room.—Apium virus, Antimonium crudum, *Chamomilla*, Hepar, Nux vomica, *Pulsatilla*, Sulphur.

——— **after coming out of the open air.**—Phosphorus.

In a warm Room.—Bryonia, Cepa, Chamomilla, Hepar, Nux vomica, *Pulsatilla*, Phosphoric acid.

Warm Stove.—Arsenicum, Pulsatilla.

External warmth.—Bryonia, Chamomilla, Hepar, Mercurius, Nux moschata, Nux vomica, Phosphorus, Phosphoric acid, Pulsatilla, Rhus, Staphisagria, Sulphur.

Something warm.—Bryonia, *Calcarea*, Carbo vegetabilis, Chamomilla, Coffea, Lachesis, Mercurius, Natrum muriaticum, Nux vomica, Phosphoric acid, *Pulsatilla*, Silicea, Sulphur.

Eating warm things.—Bryonia, Calcarea, Chamomilla, Nux vomica, Phosphorus, Pulsatilla, Silicea.

Something hot.—Belladonna, *Calcarea*, Phosphoric acid.

Drinking warm things.—*Bryonia*, Chamomilla, Lachesis, Mercurius, Nux moschata, Nux vomica, Pulsatilla, Rhus, Silicea.

Warm Bed.—Belladonna, Bryonia, Chamomilla, Mercurius, Nux vomica, Phosphorus, Phosphoric acid, *Pulsatilla*, Rhus.

Getting warm in bed.—*Chamomilla*, Mercurius, Phosphoric acid, Phosphorus, Pulsatilla.

Drinking.—Chamomilla, Calcarea, Causticum, *Lachesis*, Mercurius, Pulsatilla, Rhus, Silicea.

——— **Cold or warm.**—Lachesis.

——— **Water.**—Bryonia, Calcarea, Carbo vegetabilis, Chamomilla, Mercurius, Nux vomica, Pulsatilla, Silicea, Staphisagria, Sulphur.

——— **Wine.**—Aconitum, Ignatia, [Nux vomica, *after wine.*]

——— **Malt liquors.**—Nux vomica, Rhus.

——— **Coffee.**—Belladonna, Carbo vegetabilis, Chamomilla, Cocculus, Ignatia, Mercurius, Nux vomica, Pulsatilla, Rhus.

——— **Tea.**—China, Coffea, Ignatia, Lachesis.

Smoking tobacco.—Bryonia, Chamomilla, China, *Ignatia*, Mercurius, Nux vomica.

Salty things.—Carbo vegetabilis.

Eating.—Antimonium crudum, Arnica, Belladonna, Bryonia, Calcarea, *Carbo vegetabilis*, *Causticum*, *Chamomilla*, Cocculus, Hepar, Hyoscyamus, Lachesis, *Mercurius*, Nux moschata, Nux vomica, *Phosphorus*, Phosphoric acid, *Pulsatilla*, Rhus, Silicea, *Staphisagria*, Sulphur.

Only while eating.—Cocculus.

After eating.—Antimonium crudum, *Belladonna*, *Bryonia*, Calcarea, Chamomilla, China, Coffea, *Ignatia*, Lachesis, *Mercurius*, *Natrum muriaticum*, *Nux vomica*, Rhus, *Staphisagria*, *Sulphur*.

Chewing.—Arnica, Arsenicum, Belladonna, Bryonia, Carbo vegetabilis, Causticum, *China*, Cocculus, Coffea, *Hyoscyamus*, *Ignatia*, *Mercurius*, *Natrum muriaticum*, *Nux vomica*, Phosphorus, *Phosphoric acid*, *Pulsatilla*, Silicea, Staphisagria, Sulphur.

Only while chewing.—China.

Swallowing.—Staphisagria.

Biting.—Arsenicum, Belladonna, Bryonia, Calcarea, Carbo vegetabilis, Causticum, China, Coffea, *Hepar*, Hyoscyamus, Lachesis, *Mercurius*, Nux vomica, Phosphorus, Phosphoric acid, Pulsatilla, *Rhus*, Silicea, Staphisagria, Sulphur.

——— **something soft.**—Veratrum.

——— **soft food.**—Cocculus.

——— **hard food.**—Mercurius.

Touched by the food.—Belladonna, Ignatia, Nux vomica, Phosphorus, Staphisagria.

Picking.—Pulsatilla.

Cleaning.—Carbo vegetabilis, Lachesis, Phosphoric acid, *Staphisagria*.

Touching.—Antimonium crudum, Arnica, Arsenicum, *Belladonna*, *Bryonia*, Calcarea, *Carbo vegetabilis*, Causticum, *China*, Coffea, *Hepar*, Ignatia, *Mer-*

curius, Natrum muriaticum, Nux moschata, *Nux vomica*, Phosphorus, *Pulsatilla*, *Rhus*, *Sulphur*, *Staphisagria*.

——— with the tongue.—Carbo vegetabilis, China, Ignatia, Mercurius, Phosphorus, Rhus.

——— even very softly.—*Belladonna*, Ignatia, Nux vomica, Staphisagria.

Pressing on the teeth.—Causticum, China, Hyoscyamus, Natrum muriaticum, Staphisagria, Sulphur.

Sucking the gums.—Belladonna, Carbo vegetabilis, Nux moschata, Nux vomica, Silicea.

Rising.—Ignatia, Mercurius, Platinum.

Moving the body.—Arnica, *Belladonna*, *Bryonia*, China, *Mercurius*, Nux vomica, Phosphorus, Staphisagria.

——— the mouth.—Causticum, Chamomilla, Mercurius, Nux vomica.

Talking.—Nux moschata.

Deep Breathing.—Nux vomica.

Being at rest.—Arsenicum, Bryonia, Chamomilla, Pulsatilla, Rhus, Staphisagria, Sulphur.

Sitting.—Antimonium crudum, Mercurius, *Pulsatilla*, *Rhus*.

——— too much.—Aconitum.

While lying down.—*Arsenicum*, Belladonna, Bryonia, *Chamomilla*, Hyoscyamus, Ignatia, Mercurius, Nux vomica, Phosphorus, *Pulsatilla*, *Rhus*, Staphisagria, Sulphur.

——— on the painful side.—Arsenicum, Nux vomica.

——— on the painless side.—Bryonia, Chamomilla, Ignatia, Pulsatilla.

——— in bed.—Bryonia, Chamomilla, Nux vomica, Pulsatilla.

In bed.—*Antimonium crudum*, Belladonna, Bryonia, *Chamomilla*, *Mercurius*, Nux vomica, Phosphorus, *Pulsatilla*.

Sleep with yawning.—Staphisagria.

When going to sleep.—Antimonium crudum, Arsenicum, Mercurius, Sulphur.

While asleep.—Mercurius.

When awaking.—Belladonna, Bryonia, Calcarea, Carbo vegetabilis, Lachesis, Nux vomica, *Phosphorus*, Silicea, *Sulphur*.

Mental emotions.—Aconitum.

Vexation.—Aconitum, Chamomilla, Rhus, Staphisagria.

Passion.—Nux vomica.

Mental Exertions.—Belladonna, Ignatia, Nux vomica.

Reading.—Ignatia, Nux vomica.

Noise.—Calcarea.

Being talked to by others.—Arsenicum, Bryonia.

For women.—Aconitum, Apium virus, Belladonna, Calcarea, Chamomilla, China, Coffea, Hyoscyamus, Ignatia, Nux moschata, Pulsatilla.

Menstruation, before.—Arsenicum.

——— during.—Calcarea, *Chamomilla*, Carbo vegetabilis, Natrum muriaticum, Lachesis, Phosphorus.

— — after.—Bryonia, Calcarea, Chamomilla, Phosphorus.

During pregnancy.—Apium virus, Belladonna, Bryonia, Calcarea, Hyoscyamus Mercurius, Nux moschata, Nux vomica, Pulsatilla, Rhus, Staphisagria.

While nursing.—Aconitum, Arsenicum, Belladonna, Calcarea, China, Dulcamara, Mercurius, Nux vomica, Phosphorus, Staphisagria, Sulphur.

For children.—Aconitum, *Antimonium crudum*, Belladonna, Calcarea, Chamomilla, Coffea, Ignatia, Mercurius, Nux moschata, Pulsatilla, Silicea.

For irritable, nervous persons.—Aconitum, Belladonna, Chamomilla, Coffea, China, Hyoscyamus, Nux moschata.

For persons who have taken much mercury.—Carbo vegetabilis, Belladonna, Hepar, Lachesis, Staphisagria.

——— who drink much coffee.—Belladonna, Carbo vegetabilis, Chamomilla, Cocculus, Mercurius, Nux vomica, Pulsatilla, Silicea.

Getting better from—

Cold air.—Nux vomica, Pulsatilla.

Wind.—Calcarea.

Uncovering.—*Pulsatilla.*

Drawing air into the mouth.—Nux vomica, *Pulsatilla.*

Cold washing.—Belladonna, Bryonia, Chamomilla, Pulsatilla.

External cold.—Belladonna, Bryonia, Chamomilla, China, Mercurius, Nux vomica, Phosphorus, *Pulsatilla*, Staphisagria, Sulphur.

Cold hand.—Rhus.

Finger wet with cold water.—Chamomilla.

Holding cold water in the mouth.—Bryonia, Cepa, Coffea.

Cold Drinking.—Belladonna, Bryonia, Chamomilla, Mercurius, Nux vomica, Phosphorus, Pulsatilla, Rhus, Sulphur.

In the open air.—Antimonium crudum, Bryonia, Cepa, Hepar, Nux vomica, *Pulsatilla.*

In the room.—Nux vomica, Phosphorus, Sulphur.

External warmth.—Arsenicum, Belladonna, Calcarea, Chamomilla, China, Hyoscyamus, Lachesis, Mercurius, Nux moschata, Nux vomica, Pulsatilla, *Rhus*, *Staphisagria*, Sulphur.

Wrapping up the head.—Nux vomica, Phosphorus, Silicea.

Eating something warm.—Arsenicum, Bryonia, Nux moschata, Nux vomica, Rhus, Sulphur.

Drinking ———.—Nux moschata, Nux vomica, Pulsatilla, Rhus, Sulphur.

Getting warm in bed.—Bryonia, Nux vomica.

Drinking.—Belladonna.

Smoking Tobacco.—Mercurius.

When eating.—Belladonna, Bryonia, Chamomilla, Phosphoric acid, Silicea.

After ———.—Arnica, Calcarea, Chamomilla, Phosphoric acid, Rhus, Silicea.

When chewing.—Bryonia, China, Coffea.

Biting.—Arsenicum, Bryonia, China, Coffea.

Picking the teeth, so that they bleed.—Belladonna.

Picking the teeth.—Phosphoric acid.

Rubbing ———.—Mercurius, Phosphorus.

Touching the teeth.—Bryonia, Nux vomica.

Sucking the gums.—Causticum.

Pressing upon the teeth —Belladonna, China, Bryonia, Ignatia, Natrum muriaticum, Pulsatilla, Phosphorus, Rhus.

Moving.—*Pulsatilla*, *Rhus.*

When walking.—Pulsatilla, Rhus.

When at rest.—Bryonia, Nux vomica, Staphisagria.

Sitting up in bed.—Arsenicum, Mercurius, Rhus.
Getting up.—Phosphorus, Nux vomica.
When lying down.—*Bryonia*, Mercurius, *Nux vomica*.
——— **on the painful side.**—*Bryonia*, Ignatia, Pulsatilla.
——— **painless** ———.—Nux vomica.
——— **lying down in bed.**—Mercurius, Pulsatilla.
In bed.—Sulphur.
When going to sleep.—Mercurius.
After sleep.—Nux vomica, Pulsatilla.

The pains extend
to the jawbones and face.—Lachesis, Mercurius, Nux vomica, Hyoscyamus, Rhus, Sulphur.
to the cheeks.—Chamomilla, Causticum, Bryonia, Mercurius, Silicea, Staphisagria, Sulphur.
into the ears.—Arsenicum, Bryonia, Calcarea, Chamomilla, Hepar, Lachesis, Mercurius, Staphisagria, Sulphur.
into the eyes.—Causticum, Chamomilla, Mercurius, Pulsatilla, Staphisagria, Sulphur.
into the head.—Antimonium crudum, Arsenicum, Chamomilla, Hyoscyamus, Mercurius, Nux vomica, Rhus, Staphisagria, Sulphur.

With headache.—Apium virus, Glonoine, Lachesis.
——— **rush of blood to the head.**—Aconitum, Calcarea, China, Hyoscyamus, Lachesis, Pulsatilla.
——— **swollen veins** of the forehead and hands.—China.
——— **heat in the head.**—Aconitum, Hyoscyamus, Pulsatilla.
——— **burning of the eyes.**—Belladonna.
——— **flushed cheeks.**—Aconitum, Arnica, Belladonna, Chamomilla, Mercurius, Nux moschata, Nux vomica, Phosphorus, Pulsatilla, Rhus, Sulphur.
——— **pale face.**—Aconitum, Arsenicum, Ignatia, Pulsatilla, Staphisagria, Sulphur.
——— **swelling of the cheek.**—Arnica, Arsenicum, Belladonna, Bryonia, *Chamomilla*, Lachesis, *Mercurius*, Natrum muriaticum, Nux vomica, Pulsatilla, Phosphorus, Phosphoric acid, Staphisagria, Sulphur.
——— **salivation.**—Belladonna, Dulcamara, Mercurius.
——— **dry mouth and thirst.**—China.
——— ——— **without thirst.**—Pulsatilla.
——— **dry throat and thirst.**—Belladonna.
——— **chilliness.**—Pulsatilla, Rhus.
——— **heat.**—Hyoscyamus, Rhus.
——— **warm perspiration.**—Hyoscyamus.
——— **chilliness, heat, thirst.**—Lachesis.
——— **diarrhœa.**—Chamomilla, Coffea, Dulcamara, Rhus.
——— **constipation.**—Bryonia, Mercurius, Nux vomica, Staphisagria.

1. **Arnica** is very useful after the extraction of a tooth; it will stop the bleeding and accelerate the healing of the gums. After the insertion of artificial teeth, it relieves the pain and the swelling; after filing out carious teeth—which is sometimes a very useful operation—mix

a few globules of it in a teaspoonful of water, and put some of it on the parts which have been filed. In very intense pain, occurring after a tooth has been drawn, sometimes *Hyoscyamus* is of use; when the pain is severe after putting in new teeth, give *Arnica* and *Aconitum* alternately. *Arnica* is sometimes good for throbbing toothache, with a sensation as if the tooth were being forced out from its socket by the blood; hard swelling of the cheeks.

2. **Coffea** will remove the severest pains, which drive the patients almost frantic; they cry, tremble, and do not know what to do; the pain is indescribable. If it proves inefficacious, *Aconitum*, *Veratrum*, *Sulphur*, *Hyoscyamus*. For stinging, jerking pain, or intermitting aching and pain when chewing, it is to be preferred to all other remedies.

3. **Aconitum** must be given in all those cases where the patients are almost frantic with pain, which is indescribable, and which *Coffea* has failed to relieve; also for throbbing pains, occasioned by taking cold, with determination of blood to the head; burning in the face; it is particularly suitable for children; when it is no longer efficacious, give *Chamomilla* or *Belladonna*.

4. **Glonoine** for toothache from taking cold, after having been overheated, if the beating of the pulse is felt in all the teeth, or a drawing in all the teeth, sometimes in the upper and sometimes in the lower ones, and if the blood rushes to the head, with headache.

5. **Chamomilla** is beneficial in many kinds of toothache, particularly in children—and in persons who are frequently vexed, and who drink much coffee—also in females before menstruation; pain in hollow teeth, after taking cold when in perspiration, or when the patient is very irritable and inclined to cry; when the pain is insupportable, and aggravated periodically; worse during the night; when no particular tooth can be pointed out as the painful one; or when the tooth is hollow and loose, and feels as if too long; or when the pain extends through the whole set, and every tooth feels too long; also when it extends through the jaws into the ear, and through the temples into the eyes; when there is crawling continually, or scraping sensation in the nerve of the hollow tooth, after which the pain increases; drawing and tearing, or boring and throbbing pain; when at its height, the pain is stinging and jerking, and extends to the ear; the patient cannot bear the warmth of the bed, and the pain generally commences soon after meals, particularly after eating or drinking any thing warm; when it grows much worse after drinking cold water--also after coffee; cannot be relieved by any thing but dipping

a finger into cold water and applying it to the tooth; when, while the pain lasts, the cheek is red and hot, or the cheek and gums are swollen and of a light-red color; when the glands under the chin are painful and swollen, accompanied with great weakness, particularly in the joints; with pain in the articulation of the jaw on opening the mouth, extending to the teeth—*Chamomilla* is a certain cure. When it is partly adapted to the symptoms, and gives only partial relief, and the teeth are hollow, compare *Antimonium crudum*, and *Mercurius*.

6. **Nux moschata** suits children, women—particularly during pregnancy—and all people with a cool, dry skin, who do not easily perspire; for pains from taking cold in damp, cold weather, or from the night-air; for pains which get worse if air, particularly cold, damp air, is drawn into the mouth; if warm water or warm applications ease the pain; for toothache which is increased by the shaking of the body in going up or down stairs, if the pain commences on the right side and goes to the left; for pains as if a tooth were wrenched out; worse from much talking; the teeth become easily blunt.

7. **Nux vomica** is useful for toothache in persons of a hasty temper, with ruddy complexion, who love coffee and ardent spirits—have little out-door exercise, or who have taken cold; when a healthy tooth is painful and feels loose, or the teeth seem too long, with jerking, shooting pains in the lower jaw; a drawing pain extending into the temple, or a pain from a hollow tooth, affecting the whole face and even the bones, or extending over the whole side; or for drawing and burning pains in the nerves of a tooth, as if it were wrenched out, accompanied by violent stitches, which affect the whole body, particularly on inspiration; when a dull pain in the bones changes to a tearing pain, which passes through the teeth and jaws, or where there is a boring, gnawing, tearing pain on one side; sometimes jerking or rheumatic pains, attended with a pricking sensation; when they chiefly commence in bed or in the evening, prevent chewing, grow worse or return as soon as the mouth is opened in the cold air; or when reading or thinking; or when the tearing pains become worse from drinking any thing cold and better from external warmth; in general the pains are worse after eating and exercise; when along with the tearing pains the glands beneath the lower jaw are painful, and particularly when a swelling appears on the gums, which seems about to burst.

8. **Pulsatilla** is most suitable for persons of a mild, quiet, timid disposition, or for women and children of a fretful temper; when

the pain is only on one side; for toothache which is prevalent in the spring, accompanied by earache and headache, confined chiefly to one side; when there is a stinging pain in the decayed tooth, accompanied by great sensitiveness of the left side of the face, extending to the ear, with heat in the head and chills over the whole body; but particularly when there is a gnawing pain in the gums, and pricking as of pins, with tearing and jerking in the tooth itself, as if the nerve were stretched and then suddenly relaxed; or for jerking or tearing in the tooth as if it would start from the jaw, and aggravated by cold water, the heat of the bed, a warm room, or by taking any thing warm into the mouth; cold air relieves it—*the toothache always ceases entirely in the open air, but returns in the warm room and gets worse;* worse when sitting, better when walking about—worse from picking the teeth, better from pressure—chewing does not make it worse; it comes on mostly towards evening, rarely before, and is accompanied by chilliness and pale face, or with congestion of blood to the head; or with heat without thirst; especially for toothache caused by drinking chamomile tea.

9. **Ignatia** will be serviceable in cases where the foregoing remedies appear to be indicated, but are insufficient, and the patient is of a more tender and sensitive disposition, sometimes cheerful, at other times inclined to tears; particularly for persons who grieve much; when the jaw-teeth feel as if crushed; when there is a boring pain in the front teeth, and a soreness in all the teeth; worse after drinking coffee, after smoking, after dinner, in the evening, after lying down, and in the morning on awaking.

10. **Hyoscyamus** in very sensitive, nervous, excitable persons; the pain almost drives the patient mad—it is a tearing or throbbing, extending to the cheeks and along the lower jaw; or there is a tearing, raging pain in the gums, with a buzzing sensation in the tooth, which is loose, and feels, when chewing, as if it were coming out; or jerking, throbbing, drawing, tearing, which extends to the forehead; violent tearing pains in different teeth, as if the blood were pressed into them, occasionally accompanied by flushes of heat, with determination of blood to the head; it is aggravated by cold air; generally comes on in the morning, and is sometimes accompanied by jerking in the fingers and arms, especially in persons who are subject to convulsions.

11. **Belladonna** is frequently best adapted to females or children, particularly when the pain and anguish cause great restlessness, running about, or where there is depression, and a disposition to

cry; when the teeth and gums are painfully sensitive; when biting produces a feeling as if there were ulcers at the roots, with stinging, cutting, jerking, tearing pain; and more especially for a drawing pain, which is worse after going to bed, and during the night; or for pricking pains in a hollow tooth, day and night; or a pain in a hollow jaw-tooth, as if too much blood were forced into it, with heat in the gums and throbbing in the cheeks—nothing mitigates the pain but picking the gum until it bleeds; or the gums are swelled, with burning and stinging pains, discharge of much saliva, the cheek swelled, sometimes the eyes hot and the throat dry, with great thirst—frequently the pain returns in the morning on awaking, or recommences some time after dinner; the teeth ache when exposed to the open air, when touched, from biting, when food or hot liquids come in contact with them—pressing hard upon the cheeks sometimes gives relief.

12. **China** is particularly suited for toothache in mothers who are nursing—for persons who, otherwise cheerful, become cross and irritable; the teeth are covered with dark sordes; the pain comes on periodically, and is throbbing, tearing, jerking or drawing, with great pressure, as if the blood were forced into the teeth, or boring and numbness about the teeth—worse when in motion, when touched, and returning on exposure to a draught—the gums swell, the mouth is dry, there is thirst, the blood rises to the head, veins of the forehead and hands swell, and the sleep during the night is uneasy, although the pain is not so great.

13. **Mercurius** is frequently suitable for children; in general when there are tearing pains in several teeth at once, in hollow ones and those adjoining them—the pain affects the whole side of the face, or drawing and stinging pains extend to the ear; it is particularly troublesome during the night; or for excruciating jumping pains in the teeth, especially at night, with stitches extending to the ear and the head, which drive the patient out of bed; also for stinging pains in a decayed tooth, worse after eating or drinking any thing cold or warm; the pain is generally increased by cold, and particularly by damp air, is less severe when in a warm place, or when the cheek is rubbed—sometimes the air, when rushing in, causes pain in the front teeth; or the toothache is only felt during the day and ceases during the night, and is followed by perspiration, and in the morning the same pains return again, in paroxysms, with longer or shorter intervals, alternating with giddiness, or tearing in the limbs; the teeth are almost always loosened, the gums swell or become white and

ulcerated, are detached from the teeth, burn and ache when touched; or they begin to itch, to bleed and to suppurate, with tearing through the roots of the teeth, or with painful swelling of the cheeks.

14. **Hepar** will be beneficial after *Mercurius* or *Belladonna*, when the painful swelling of the gums continues, or for a throbbing pain as if blood were entering the tooth, or a drawing pain; the pains worse after eating, and in a warm room, or at night.

15. **Carbo vegetabilis** is sometimes useful when *Mercurius* or *Arsenicum* gives some relief, without effecting a perfect cure; also in persons who have taken much calomel, particularly when the gums bleed, and are detached from the teeth; the teeth are loosened, become ulcerated, and ache when touched by the tongue; worse after eating, with drawing and tearing pains in the incisors.

16. **Sulphur** is most suitable for jumping pain in hollow teeth—extending to the upper and lower jaw, or to the ear; for swelling of the gums, attended with throbbing pain, bleeding of the gums, and swellings around old stumps; for toothache in the evening, or in the air, from draught, worse when rinsing the mouth with cold water.

17. **Phosphorus** for toothache from washing or from having had the hands in cold or warm water.

18. **Cepa** for toothache with cold in the head, which gets better when the catarrh becomes worse, and which gets worse when the catarrh ceases; from damp, cold weather, and wind; it commences on the left and goes to the right side; is worse in the warm room; throbbing, drawing, pressing pains, with swelling of the cheek; worse when chewing; better from cold water; the teeth become yellow; for people who have an offensive breath, or who are fond of being in the open air and like to wash themselves frequently.

19. **Arsenicum** when the teeth are loose and elongated, with constant jerking or burning, and tearing in the gums, worse when touched, when lying on the affected side, and when at rest, and also from cold; the pains are mitigated by the heat of the stove, by hot applications, or by sitting up in bed; it is particularly indicated when the pains are very debilitating.

20. **Antimonium crudum** is the principal remedy for pains in hollow teeth, of a boring, digging, tearing, jerking character, which sometimes penetrate into the head; the pains are aggravated in the evening in bed, after eating, by cold water; and better when walking in the open air.

21. **Bryonia** for passionate, irritable, cross, obstinate people; pain occasionally in hollow but more frequently in healthy teeth; shoot-

ing pains with twitching towards the ear; tearing pain extending to the cheek, and acute pains as if caused by an exposed nerve; sensitiveness and pain in the decayed teeth from contact with the air; the teeth feel as if too long and loose, and when chewing they feel as if they would fall out. The pains are aggravated by smoking or chewing tobacco; from the introduction of any thing warm into the mouth—better in the open air—sometimes relieved by cold water, but only momentarily, and also when lying on the affected cheek, but worse when lying on the other. Likewise, when the pain shoots from one tooth into the other, and also into the head and cheeks.

22. **Rhus** for the same painful sensation of elongation and looseness of the teeth, as *Bryonia*, and also when they feel as if they were asleep, (*China, Dulcamara,*) and hollow, or sensitive to the air; the gums are swollen, burn, and itch like an ulcer, or they are sore and detached from the teeth; for jumping, shooting, or drawing pain, as if the teeth were being torn out, (*Pulsatilla,*) or pressed into their sockets, (*Staphisagria,*) or for slow pricking or throbbing or tearing in all the teeth, extending into the jaws and temporal bones, with a painful soreness of one side of the face, from taking cold, or from vexation, worse in the air, insufferable during the night, and mitigated by heat; sometimes accompanied by an offensive smell from the carious teeth. It suits best for quiet persons (unlike *Bryonia*) who are disposed to sadness and melancholy, or are easily agitated and frightened, (similar to *Belladonna.*)

23. **Staphisagria,** when the teeth become black and hollow, the gums pale, white, ulcerated, and swollen—aching when being touched; intense gnawing, drawing, or tearing pains in decayed teeth, particularly in the roots, or extending through a whole row, or when the pain shoots from a hollow tooth into the ear, with throbbing in the temple—worse in the open air, from drinking any thing cold, from eating, and particularly during the night or toward morning.

24. **Lachesis,** pain in all the decayed teeth during rush of the blood to the head; drawing, tearing, throbbing, boring pain in the jaw-bones; hollow teeth feel too long; pain extending down the throat; better when pus is discharged; gums swollen, bleeding easily, or they are bluish red, beating and burning, worse from any thing warm; toothache worse after warm and cold drinks, after eating and awaking; with headache, beating over the eyes, stitches in the ears, swelling of the cheek; pains in the limbs of the opposite side, chills, fever, and thirst. It is particularly suited for colds in damp, warm, spring weather; during menstruation, the smaller the discharge the greater

the pain, at the cessation of the menstruation; for melancholic and choleric persons, for persons of vivid imagination; after long-continued grief, and after the abuse of mercury.

25. **Phosphoric acid** is suitable for bleeding and swollen gums; tearing pains which are worse when warm in bed, and also from heat and from cold, burning in the front teeth during the night; pains from hollow teeth, extending into the head.

26. **Apium virus** for the most violent pains in the gums, also for jerks and throbbing in the molars, with involuntary, sudden biting together of the teeth, headache and bleeding of the gums.

27. **Silicea** for tedious, boring, tearing pains day and night, worse during the night, spreading over the whole cheek, also into the bones of the face; discharge of offensive matter from openings near the roots of the teeth, or from the gums; swelling of the jaw.

28. **Dulcamara** is sometimes useful for toothache proceeding from cold, particularly when accompanied by diarrhœa, and when *Chamomilla* does not answer; also when there is at the same time confusion of the head, or when the toothache is accompanied by profuse salivation, (similar in this to *Belladonna* and *Mercurius*) and the teeth feel blunt.

29. **Calcarea**, for toothache in pregnant females; pains in hollow teeth, especially around loose stumps; pressing, drawing, jerking, soreness; drawing, pricking, rooting, gnawing, grubbing, throbbing pains, with swelled gums, which are sore, bleed easily, throb and pain; it is only suitable when there is determination of blood toward the head, particularly during the night; when the pains are caused by taking cold, or are aggravated by cold or a draught of air; the patient can neither bear warm nor cold drinks—even noise makes it worse.

30. **Causticum**, for toothache arising from breathing in the open air, generally attended with stinging, throbbing pain, and a feeling of soreness; or the teeth feel painfully loose and lengthened, as if forced out of their sockets, (*Arnica, Phosphoric acid;*) when there are ulcers at the roots of the teeth, the gums suppurating are swollen and very tender. The pain frequently affects the whole of the left side of the face, especially at night when the patient lies on it, and is equally sensitive to heat and cold; in long-continued or often-returning colds.

Swelled Face.

When the cheek remains swollen after the toothache has ceased, it may be removed by giving *Pulsatilla*, if *Mercurius* or *Chamomilla* have

been previously taken for the pain; or *Mercurius*, after *Pulsatilla* or *Belladonna;* or *Belladonna* after *Mercurius;* or *Sulphur*, after *Belladonna, Bryonia, Arsenicum, &c.* If the swelling is red, as in erysipelas, *Mercurius* should be given; if less red, but hard and stiff, *Arnica. Hepar*, when the swelling begins to soften, and appears as if about to suppurate, followed by a dose or two of *Lachesis* if the *Hepar* does not effect a speedy abatement of the swelling, and then by *Hepar* again or by *Mercurius*, if the latter have not been taken before.

The Tongue.

To this movable piece of furniture of the human economy great attention has been paid by physicians of all shades and in all times. And, indeed, it presents often quite characteristic diagnostic as well as therapeutic hints. The most important of these features are the following: considering

1. Its Color.

It is either *too red* all over, as in scarlet fever, with considerably raised papillæ—whence the name *strawberry tongue*—or *red and dry*, as in inflammations of the brain and its membranes; in inflammation of the thoracic viscera and mucous membranes of the stomach and intestines; or *red on the edges and on the tip, or a red, dry streak in the middle of the tongue* in typhoid fevers, or *red, clean, and glossy*, indicating great fever heat, congestion to the head, impending delirium, and, in gastric fevers, the transition into the typhoid state; and if, at the same time, *cracked*, ulceration of the bowels.

A pale tongue is found in chills; in spasms; after loss of vital fluids; in chlorosis, dropsy, and general exhaustion. When it sets in in exanthematic, gastric, or bilious fevers, it denotes a fatal issue.

A lead-colored tongue is found in cholera, in mortification of the lungs and stomach, in scirrhus of the tongue.

A lead-colored tongue, with thrush, denotes impending death under all circumstances.

A bluish tongue is a sign of impeded circulation of blood, and, therefore, it may be found in paroxysms of asthma, hooping cough, croup, bronchitis, pneumonia, heart diseases, dropsy of the chest, and cyanosis. Scurvy and mercurial inflammation of the tongue have also a bluish hue.

2. Its Humectation.

A moist tongue is, in general, a favorable sign. But in putrid fevers, with exhausting perspiration, it has no such favorable meaning.

A constantly moist tongue in soporous conditions denotes great exhaustion.

A dry tongue is found in a great many different morbid conditions, especially in feverish affections.

Great dryness of the tongue in typhus cerebralis is, according to Schoenlein, an unfavorable sign.

Dryness of the tongue in infants is a forerunner of thrush or internal inflammation.

3. Its Temperature.

A hot tongue is found in congestive and inflammatory states of different parts of the body; in infants before thrush appears.

A cold tongue is found in chills, violent spasms, after great loss of blood, internal mortification, apoplexy, cholera. In fevers it denotes greatest prostration and impending death.

4. Its Covering or Coating.

We must bear in mind that the tongue is coated or furred without indicating any disordered state of the system—in the morning by an empty stomach; after siesta; after night-watching, and with habitual smokers of tobacco.

A coating of the root of the tongue does not mean much; in a slight degree every one has it, even in the best of health.

A coating *on the tip* of the tongue is said to be found in phthisical persons.

One-sided coating is said to be found in one-sided complaints, as prosopalgia, paralysis; in one-sided lung diseases; in affections of the liver and spleen.

A *patchy* or *map tongue* is often indicative of considerable irritation, or mere partial inflammation of the stomach; likewise it has been observed in lung diseases.

A thick, white coating occurs most extensively in affections of the fauces; but also in gastric derangements.

The *yellow coating* is generally believed to be bilious; *single yellow streaks* on a white-coated tongue indicate obstinacy of the disease.

A peculiar buff leather appearance is presented in cases of enteritis and hepatitis.

A dark-brown coating exists in malignant fevers, and in hemorrhages from the mouth.

A black coating, in *dysentery*, indicates exhaustion—mortification—death. *In jaundice* it denotes organic diseases of the liver, spleen; as, induration, tubercles, abscesses. *In small-pox* it is quite an unfavorable sign.

5. Its Form and Size.

We find *a large, long* tongue most conspicuously in chronic hydrocephalus and cretins.

A small tongue, if not congenital, in atrophy, consumptive diseases, and long-standing paralysis of the tongue; especially if caused from an irritation of the brain or spinal marrow.

A sudden diminution in size denotes, in inflammatory diseases of the lungs and liver, formation of abscesses; also general exhaustion; especially in putrid and typhoid fevers.

A gradual decrease, in acute diseases, denotes gravity and obstinacy of such diseases, and is a sign of a dangerous affection of the brain. (Sprengel.)

A broad tongue is found in rhachitis, scrofula, inclination to abdominal affections, and in intermittent fevers.

A narrow, pointed tongue is said to be found in persons who are subject to spitting of blood, tuberculosis, and internal inflammations.

A thick, swollen tongue is found in rhachitis, cretins, chronic dropsy of the head, in obstinate dyspnœa, and chronic inflammation of the mucous membrane of the stomach; also in intermittent fevers, catarrhal affections, mercurial salivation, inflammation of the tongue, in old drunkards; after death from strangulation or suffocation.

A swollen and heavy tongue in old age is the forerunner of apoplexy; the same in drunkards. In fevers, if associated with dryness and stammering speech, it denotes congestion of the brain. In croup, pleurisy, and pneumonia, it is a bad sign, just as bad as its sudden diminution, without improvement of the other symptoms. (Hippocrates.)

A thin, like a small, tongue is found in atrophy, consumptive diseases.

Tumors on the tongue, if hard, brownish-red, with bluish blood-vessels interwoven, are of a scirrhous nature.

Single lumps and *fleshy excrescences* on the tongue are found in elephantiasis.

6. Its Consistency.

We find *a hard* tongue associated with great dryness of the tongue in congestion, inflammation, in fevers, in tonic spasms, in scirrhus, and other degenerations of the substance of the tongue.

A soft tongue we find in catarrhal affections, in chronic mucous diarrhœa, gastric derangements, and in paralysis of the tongue. When *soft,* the teeth generally show their imprints on its sides,—often found after mercurial poisoning. In brain diseases a soft tongue is a bad sign.

7. Cracks and Fissures

On the dry tongue, sometimes deep, bleeding and suppurating, are found in typhoid fever, in small-pox, dysentery.

8. Paralysis

Of the tongue, which manifests itself by an imperfect, stammering speech, is often the consequence of apoplexy, softening, or other affections of the brain.

Its *immobility* and its *trembling* are signs of torpor of the brain, especially in consequence of typhoid conditions.

Therapeutic Hints.

Bell., Tart. em., *a red tongue all over,* with considerably raised papillæ.
Kali bichr., Lach., *a red, glistening tongue.*
Rhus tox., *a red tip,* in the shape of a triangle.
Sulphur, *a red, undefined tip and red borders.*
Arsen., *a lead-colored tongue.*
Digit., Arsen., Mur. ac., *a bluish tongue.*
Rhus tox., *a whitish coat on one side of the tongue.*
Caust., *on both sides.*
Phos., Bryonia, *in the middle only.*
Sepia, *on the root, strongly marked.*
Bryonia, Ant. crud., and others, *a general thick, white coat.*
Arsen., Lach., Natr. m., Nitr. ac., Taraxacum, *a map tongue.*
A yellowish tongue, a number of remedies.
Lach., Rhus t., Sulphur, Kali bichr., *a dry, red tongue, cracked at the tip.*
Bryon., Puls., *a dry tongue, without thirst.*
Merc., Rhus t., Stram., *a soft tongue, with imprints of teeth.*
Cina, Dig., *a clean tongue, with gastric and other derangements.*
Lachesis, *trembling of the tongue,* when the patient is requested to put it out; or inability to do so; in typhoid fevers.
Lycopodium, *a heavy, also trembling tongue;* in typhoid conditions, especially if the lower jaw commences to sink down.
Lycopodium, *an involuntary darting of the tongue out of the mouth, and moving between the lips to and fro;* in typhoid conditions.
Baryta c., *perfect paralysis of the tongue.*

Special Diseases of the Tongue.

Glossitis, *Inflammation of the Tongue.*

This affection is generally confined to the more superficial parts of the tongue; but it may pervade the whole substance of the organ. Its objective signs are redness, heat, and swelling; and in severe cases, the swelling is so great as to threaten suffocation; it ends either in resolution, suppuration, or hardening; rarely in mortification.

Therapeutic Hints.—Compare Apis, Arsen., Canth., Plumb., Ranun. scel., Sulph., Sepia.

Lachesis, blisters on the inflamed tongue, which change into ulcers.

Sulph. ac., ulcers on the inflamed tongue.

Petroleum, with fetid salivation.

Cupr. ac., Calc. c., Hepar, Nitr. ac., Sulph., after abuse of mercury.

Carbo veg., Con., Lycop., Mezer., when becoming indurated.

Cancer of the Tongue

Commences usually at the edge, near the tip of the tongue, forming a small, hard sore, of a roundish shape, with raised edges and uneven bottom. By-and-by the adjacent parts of the tongue begin to swell, and the cancer itself spreads either upon the superior or inferior surface of the tongue. In its further progress the motion of the tongue becomes difficult, and the swallowing of solid food impossible. A great deal of saliva is secreted, and as the swallowing is painful and difficult, the patient spits all the time. The glands under the tongue, and also the lymphatic glands of the neck, swell and harden; the tongue becomes firmly attached to the bottom of the mouth, so that its motion is almost destroyed; it gradually becomes transformed into a thick, shortened, misshapen lump, with different round protuberances upon it, which break and emit a terrible smell. Sometimes the glands of the neck and the region of the parotid glands swell to such an extent that it is impossible to open the mouth, and the patient gradually sinks under excruciating suffering, starvation and exhaustion. The disease is slow, lasting from one to three years.

Therapeutic Hints.—Compare Ars., Caust., Carbo an. and veg., Con., Hydrastis, **Lachesis,** Phytolacca, Sepia, Silicea, Sulphur.

The Salivary Glands and their Ducts.

There are three pairs of such glands: the *parotid*, which is situated near the ear on each side; the *submaxillary*, lying in the posterior angle of the submaxillary triangle of the neck on each side; and the *sublingual*, which is imbedded beneath the mucous membrane of the floor of the mouth on each side of the frænum linguæ. The excretory ducts of the parotid, called *Stenon's* ducts, open at the internal surface of the cheeks, opposite the second molar tooth of the upper jaw; those of the submaxillary, called *Wharton's* ducts, open by the side of the frænum linguæ; and those of the sublingual, which are seven or eight in number, also open in this same locality. The product which they pour forth into the mouth is the *saliva*. This very important fluid is greatly altered by disease; but still, all the microscopical and chemical researches have failed to reveal any facts which can be considered of diagnostic value.

The saliva varies in *quantity*.

There is *normally* less secretion in the first four months of infancy, and also in the last years of old age. But its secretion may be *abnormally* lessened by deficiency of beverage, or by different pathological conditions, which induce copious secretions of fluids, either through the skin, or kidneys, or serous membranes.

An increase of saliva (salivation, ptyalism) may be caused by various drugs, as our Materia Medica shows; but the most known and the most virulent is that caused by *mercury*. It is accompanied by a most sickening, penetrating smell from the mouth, swelling and inflammation of the gums, loosening and falling out of the teeth, stomatitis, and ulceration of the mucous membrane.

The *color* of the saliva may also be changed.

A blue color has been observed in slow poisoning cases by lead.

Yellow, even *greenish,* saliva has been found in liver complaints and jaundice.

A red, bloody saliva in different morbid conditions, when it becomes mixed with blood, as in hemorrhage from the mouth or nose, inflamed and bleeding gums, &c. But has also been found in suppression of hemorrhoidal and menstrual discharges. After external injury of the head, bloody saliva is, like bleeding from the ears, a sign of fracture of the skull bones.

Its chemical reaction in a healthy state is *alkaline;* if *it be acid,* it indicates a disturbance in the digestive organs. It may also become acid in diseases of the intestines, in rhachitis, gout, and in scrofulous

conditions. In a normal state, saliva contains more or less rhodankalium or sodium, or sulphocyanide of potash or soda, which can be easily detected by a drop of sesquioxide of iron; which being added to some saliva, changes it to a deep red color. In small-pox this substance seems to be wanting in the saliva; this, however, is not yet fully confirmed.

Special Diseases of the Salivary Organs.

Inflammation and Induration

Are morbid conditions, to which all glands are more or less subject.

The most noted of these inflammations is

Parotitis, Angina Parotidea, *Mumps.*

This affection generally seems to prevail epidemically in damp seasons, and usually attacks children and young people; but it is also often found in cases of scarlet fever; when, of course, it must be considered as a symptom of the latter. *Mumps* is an epidemic form of this inflammation. It is very apt to be modified in its action by metastasis; appearing in the testicles in the one sex, and in the mammæ or ovaries of the other.

It begins as a swelling in front of and below the ear, and extends sometimes over the whole affected side of the face, involving the submaxillary glands and tonsils, changing the features of the patient, hindering speech, mastication and even deglutition. The color of this swelling may be nearly normal, or pale; but often it is very red and sometimes purple. It is almost always attended with fever.

Mismanaged cases may end in induration, suppuration and even mortification.

Therapeutic Hints.

Bellad., *a bright-red swelling*, especially on *right* side.
Rhus t., if *dark red*, and especially on *left* side.
Merc. fol., if *pale.*
Carb. veg., **Coccul.**, *with lingering fever.*
Puls., in case of *metastasis to the mamæ.*
Carbo veg., **Ars.**, *to the testicles.*
Arsen., **Phos.**, **Silic.**, when *suppurating.*
Lyc., **Nit. ac.**, **Phytol.**, *with fistulous openings.*
Baryta mur., **Calc. c.**, **Carb. veg.**, **Sulph.**, *when indurated.*
Baryta mur., **Kali c.**, **Rhus t.**, *after scarlet fever.*

Ranula, *Frog.*

By this term is meant a swelling, which grows slowly on the floor of the mouth under the tongue, either in the middle, or on one side of the frænum linguæ, and which is supposed to be a widening of Wharton's duct. *Schuh*, however, considers it to be an independent cyst, not connected with that duct. Whatever it be, its objective symptoms are the following: it is a soft, elastic, fluctuating and transparent kind of blister or bag, whose sheath is similar to a fine serous membrane, and the contents of which consist of a gluey, transparent, pale-yellowish or brownish fluid, of alkaline reaction, and without microscopic elements. It may grow to a considerable size, so as to interfere with chewing, talking, and even breathing.

It varies considerably in size and form, the latter depending somewhat on the former. When small it is globular; but as it increases in size, the shape is modified by the surrounding tissues.

Therapeutic Hints.—Compare Bell., Calc. c., Fluor. ac., Merc., Mezer., Nitr. ac., Thuya.

The Tonsils.

These are two almond-shaped glandular organs, which are situated on each side of the fauces, between the anterior and posterior pillars of the soft palate. They are liable to

Tonsillitis, *Acute Inflammation, Quinsy.*

In this affection there are redness and swelling of all the adjacent structures; so that the aperture of the fauces seems encroached upon from all sides. The affected tonsil protrudes towards the uvula, which is swollen and elongated; and the whole mucous membrane of the fauces is remarkably red and injected. Even the submaxillary region sometimes becomes involved in this process.

Deglutition is extremely painful; the tongue has a thick, white, and sometimes buff-colored coating. This complaint is attended by some fever. Its course is usually rapid, ending in a few days by suppuration, or occasionally by resolution. Persons once affected by tonsillitis are liable to repeated attacks.

Therapeutic Hints.

Ammon. mur., both tonsils much swollen; can neither swallow, talk, nor open the mouth; after taking cold.

Apis mell., stinging, burning pain when swallowing; dryness in the mouth and throat; red and highly-inflamed tonsils.

Baryt. c., liability to tonsillitis after slight cold, or suppressed sweat of the feet; tonsils incline to suppurate; especially *right* side.

Bellad., especially *right* side; also swelling of the neck, externally; painful to touch and motion; congestion of the head.

Hepar, sticking pain as from a fishbone in the throat when swallowing; tendency to suppurate; after mercury.

Laches., especially *left* side; choking when drinking; fluids are driven out through the nose; worse in afternoon, after sleep, from slightest touch; can't bear bed-clothes near the neck.

Merc., dark redness; fetid ptyalism; very offensive smell from the mouth; aphthæ, or thick coating on the tongue.

Silic., in stubborn cases where abscesses form, yet don't break; especially *left* side.

Sulphur, when, after the bursting of the abscess, the parts still remain irritated, and the patient does not recover as fast as he should.

Recommended without special indications, Gels., Phytol., Podoph., Sanguin.

Ulceration of the Tonsils.

This affection is either a sequela of an acute attack of inflammation, or of scarlet fever; or else it has a scrofulous or syphilitic origin. To define it the whole history of each case will have to be questioned. Its treatment must therefore be determined entirely by the totality of the symptoms of the individual case, and not simply by the ulcers on the tonsils.

Chronic Enlargement of the Tonsils

Often occurs in scrofulous children. It is often developed to such an extent as to impair respiration, and even the sense of hearing, in case the swelling should extend to the Eustachian tubes. Simple inspection discovers the whole complaint. Children affected in this way generally keep their mouth open, and they always sleep with the mouth open, the head thrown back, and with loud snoring.

Therapeutic Hints.—As generally indicated, compare Bar. c., Calc. c., Ign., Lyc., Sulphur.

The Uvula and Soft Palate.

Both of these structures are subject to inflammation, and are always more or less involved in tonsillitis.

Inflammation of the *uvula* causes a swelling and elongation of this little body, sometimes to such a degree that it lies like a little finger upon the tongue, causing a constant hacking and hemming, except when lying on the back. This is what in common life is styled *falling* of the palate. Both are subject to ulceration of different forms—idiopathic, scrofulous, syphilitic.

Therapeutic Hints.

As acting especially upon the uvula and soft palate, compare Acon. Bell., Coffea, Crot. tigl., Lach., Merc., Nux. v., Natr. m., Phosph.

The Fauces.

By this term we mean the back part of the root communicating superiorly with the posterior nares, inferiorly with the pharynx and larynx, and anteriorly with the cavity of the mouth. They are subject to exactly similar inflammations as the adjoining parts already considered; and as they are lined by the same mucous membranes, they are almost always more or less involved in those inflammatory processes of which we have spoken. Still there may be an inflammation of the fauces alone without much swelling of the tonsils or palate, a condition which is generally termed *sore throat*, *angina faucium*.

Angina Granulosa or Follicularis.

This affection is generally of a chronic form and is very frequently observed in this country. Ocular inspection discovers upon the pharyngeal wall of the fauces little, roundish, smooth, elevated spots, like peas split in half, which either stand singly, scattered over that surface, or in rows or ridges extending from above downwards. They are swollen follicles or sebaceous glands. The surrounding surface of the fauces is always more or less inflamed, and often coated with a thick, tough, yellowish, or greenish phlegm, which adheres tightly to the wall and seems to come down from the posterior nares; sometimes, however, the fauces appear very dry. As it frequently attacks public speakers, clergymen, and the like, it is popularly known under the name of *preacher's sore-throat*. The inflammation

is not confined to the pharyngeal part of the fauces, but may spread down to the larynx and trachea, causing a constant inclination to cough. The color of the fauces varies from a bright redness, with enlarged veins radiating hither and thither, to a deeply-injected brown-red hue

Therapeutic Hints.

Alumina, soreness, rawness, hoarseness, dryness; or secretion of thick, tough phlegm; worse in the afternoon and evening; better from eating and drinking *warm* things.

Arum triph., constant hawking; profuse secretion from posterior nares and fauces; hoarseness worse from talking.

Arg. nitr., collection of thick, tough phlegm, causing gagging; wart-like excrescences; feeling of a pointed body in the throat when swallowing, belching, breathing, or moving the neck.

Arnica, great hoarseness from preaching or public speaking.

Kali bichr., secretion of very ropy or stringy phlegm through the posterior nares and fauces.

Lachesis, much inclination to swallow, although it is very painful, with spasmodic contraction of the throat; worse on left side, and worse after sleep; can't bear any pressure about the neck.

Lycop., the fauces look brown-red; worse on right side; sometimes a hard, green-yellowish phlegm is hawked up in the morning.

Natr. m., always after a local application of nitrate of silver; feeling of great dryness in the throat, and yet a constant hawking up of a transparent thin mucus.

Petrol., in dry sore throat, and with mucous secretions; stitches into the ears during deglutition, and burning in the neck.

Phosph., when the throat is very dry, fairly glistening.

Plumbum, when the disease spreads from left to right.

Sapo sodæ, after burning the throat by swallowing hot things.

Phytol., dryness, feeling as if a ball of red-hot iron had lodged in the fauces, when swallowing; can't eat hot fluids; choking sensation.

Ulcers in the Fauces, *Ulcerated Sore-Throat.*

The above-described inflammation of the follicles may terminate in ulceration; or the ulcers may be in consequence of a scrofulous diathesis; or they may have a syphilitic origin. The diagnosis of these different conditions might be accurately determined by a correct history. Besides, the diagnosis will be facilitated by considering that *catarrhal* ulcers are superficial; the *scrofulous* ulcer is deep, but has

flabby, perhaps jagged edges, which do not project; the *syphilitic* ulcer, however, is deep and rounded, with elevated serpiginous and defined borders.

Therapeutic Hints.—Compare Angina faucium.

Alumina, the inflamed parts are spongy; the ulcerated surface secretes a yellow-brownish, badly-smelling pus; a boring pain from the fauces to the right temple and head.

Aurum, putrid, cheese-like smell from the mouth; deep ulcers affecting the bones; after the abuse of mercury

Baptisia tinct., putrid, dark-looking ulcers; fetid breath; great prostration.

Hydrastis can., extensively used by western Homœopathic physicians for ulcerated sore throat; no characteristics given.

Kali bichr., deep ulcers, eating even through the velum palati; bones of the nose affected; fetid discharge from the nose; syphilitic origin.

Lachesis, spasmodic contraction of the fauces when swallowing, &c.; compare Inflammation of Fauces.

Merc., ptyalism, fetid smell; secondary syphilis.

Nitr. ac., after the abuse of mercury; syphilis.

Sanguin., rush of blood to the head; flying heat; throbbing in the head from the nape upwards; distended veins in the temples.

Retro-pharyngeal Abscess.

This is a gathering behind the posterior wall of the fauces, between its pharyngeal portion and the cervical vertebra. It commences with swelling, stiffness of the neck, and an inability to carry the head erect. At the same time swallowing becomes more difficult, and, in the attempt to swallow fluids, they return through the nose. The breathing becomes difficult, noisy, and rattling, and the patient talks through the nose and very indistinctly. On examination, the whole fauces appear highly inflamed, and a swelling is discovered protruding from the pharyngeal wall of the fauces on one side of the median line. It sometimes attains the size of a hen's egg, and thus impedes respiration, sometimes dangerously. It is often connected with caries of the cervical vertebræ. This affection may be, and has no doubt been, often confounded with *tonsillitis*, and I do not know whether the popular term "*quinsy*" has not just as often been applied to this kind of abscess as to tonsillitis.

The difference between retro-pharyngeal abscess and tonsillitis lies in their respective location. The first is situated further back

and lower down, although almost always above the level of the epiglottis; whilst tonsillitis appears more anteriorly on the sides, precisely in the position of the tonsils. A careful ocular inspection will teach this.

From croup it is easily distinguished by its appearance, its nasal voice, and its aggregation in a horizontal position, whilst croup has its peculiar-sounding cough, a hoarse voice, and amelioration in a horizontal position, or even backward inclined position of the head.

Therapeutic Hints.—Main remedies, Hepar, Silicea.

In the attempt to swallow fluids they regurgitate through the nose: Aurum., Bell., Lach., Lyc., Merc., Nitr. ac., Phos.

The Mucous Membrane of the Mouth in General.

This is a continuous membrane covering the inside of the cheeks and all the organs within the cavity of the mouth except the teeth, lining the fauces, and extending thence upwards into the nose and downwards into the œsophagus, stomach, and intestines, and by way of the larynx and trachea into the finest bronchial tubes.

Its Special Diseases.

The Sore Mouth of Infants—Thrush.

This affection appears on different parts of the mucous membrane in the mouth, on the lips, tongue, pharynx, and even in the œsophagus, but scarcely ever in the stomach; more or less extended, in the shape of whitish, somewhat elevated points or patches, covering, sometimes, the whole mucous membrane like a creamy, cheesy crust. If we remove this coating the mucous membrane underneath appears sound and unhurt, or only slightly reddened. On examination by the microscope these creamy masses appear to consist of accumulated epithelial cells, fat globules, &c., and a vegetable sponge-like parasite, which branches out tree-like in every direction, and, if very numerous, *mats* the whole coating into a thick, dirty-yellowish mass. This is the *thrush* of *infants* in their first days or weeks, seldom in the second month of their lives.

The thrush of *adults* is of rare occurrence, and is found only in consequence of long and exhausting diseases shortly before death. Its pathological character is identical with that described above.

Therapeutic Hints.

Wash the mouth always after nursing with a rag dipped in water or a mixture of wine and water.

Arsen., in adults, great burning, exhaustion, deep illness.

Borax, great heat and dryness in the mouth.

Mercur., confluent thrush, changing into cankers; ptyalism; bad smell from the mouth; feverishness; green slimy stools.

Staphis., thrush changing into canker-sores with a bluish-red or yellowish bottom; more or less flow of saliva and bad smell.

Sulphur, sour smell from the mouth; stools slimy with much straining, or painless; worse in the morning.

Sulph. ac., after borax, increased flow of saliva, yellowish color of the skin.

Aphthæ of the Mouth.

According to Bednar, aphthæ are roundish or oval shaped patches of exudation of the mucous membrane of the mouth, usually situated at the angle which is formed by the roof of the mouth with the upper alveolar processes of the soft palate; but are sometimes dispersed in considerable number all over the mucous membrane of the mouth, and on the tongue. There appears at first a network of injected blood-vessels; and a day or two later, exudation takes place, of the size of a pin's head. This exudation enlarges to the size of a lentil, is grayish or yellowish-white, and is surrounded by a red, inflamed areola. As they enlarge, some of them coalesce. By-and-by the exudation dissolves, and leaves an excoriated surface of submucous cellular tissue, circumscribed by the excoriated mucous membrane. It heals again without a cicatrix.

Thrush and *aphthæ* exist simultaneously; and this is, no doubt, the reason why we also find them mixed up in books. We must remember, however, that nature does not follow books, but has her own notions; so that, under certain circumstances, thrush too might leave excoriated spots, and show thus a connecting link between itself and aphthæ.

What Bednar describes under the name of *aphthæ* seems to me to correspond more or less to what is commonly called *cankers of the mouth.*

Therapeutic Hints.

Calc. c., canker-sores, especially during teething.

Helleb., canker-sores, flat, yellowish, with raised edges upon an

inflamed basis; ptyalism; fetid smell from the mouth; glands swollen on the neck and under the jaw.

Lachesis, canker-sores on tip of tongue.

Lycop., canker-sores under the tongue, near the frænulum.

Mercur., thrush confluent, changing into cankers; ptyalism, bad smell from the mouth, feverishness.

Nitr. ac., canker-sores; saliva fetid and acrid, causing new sores on lips, chin, and cheeks; pustules, with red circumference, here and there on the body.

Nux vom., canker-sores, gums inflamed, putrid smell from the mouth, constipation.

Staphis., thrush, which changes into canker-sores with a bluish red or yellowish bottom; more or less flow of saliva and bad smell.

Sulphur, canker-sores; after Nux v. or Merc., gums swollen, bloody saliva runs out of the mouth.

Diphtheria, Diphtheritis.

This disease has been observed and described by medical writers of all nations under different names. Its history has indeed been traced back as far as Homer. In the sixteenth century it was epidemic in Holland, and was described by P. Forrest. Towards the end of that century it raged in Spain, killing a great number by suffocation; whence it was called *garotilla.* Since then it has been observed everywhere, more or less violent; and in this country within a few years.

It consists of a croupous or plastic exudation from the mucous membrane of the fauces, mouth and nostrils; commencing with febrile sensations, chilliness and some difficulty in swallowing. The fauces look inflamed; of a dark mahogany color; and soon become covered (usually after the first or second day) with a dirty-grayish, or gray-yellowish exudation of various thickness; commencing in spots and patches, generally on the tonsils at first; spreading over the soft palate and fauces into the posterior nares and cavity of the nose, and in some cases into the œsophagus and larynx. When this skinny exudation is loosened and removed by external means, it shows a merely inflamed-looking, sometimes an excoriated or ulcerated surface of the mucous membrane beneath, which soon is covered again by the same skinny mass. Where it loosens itself and is thrown off spontaneously, it generally does not renew itself. In malignant cases this pseudo-membrane dissolves into an ill-looking ichorous mass, under which the mucous

membrane appears in decayed shreds or dark-colored crusts, emitting a most offensive odor. Mostly there co-exists a swelling of the submaxillary and parotid glands and of the lymphatics. The great prostration of all the vital power, which accompanies it from the first, is quite characteristic of this complaint.

As to its *causes*, all writers agree that it is the effect of some *specific poison*, the nature of which we know just as little as that of cholera, typhus, or yellow fever; and as all persons are not attacked by it, it requires a *predisposition* of the organism to it. We do not know, however, in what this consists. Besides, the atmospheric influences upon its spreading are not clearly understood; it seems, however, that it is rather more prevalent in spring and summer than in winter, and more in damp, rainy weather than in a uniformly dry temperature.

Diphtheria is *not contagious*, like the eruptive fevers, (scarlatina, measles, small-pox;) there is no evidence that it ever was conveyed by *fomites;* but we can easily conceive of an epidemic cause, which may bring about more or less contamination of the atmosphere, thus rendering susceptible persons liable to contract the disease from breathing the atmosphere; or it may be propagated by an immediate inoculation of a portion of the vitiated secretions to an absorbent surface of another person, provided this person afford a congenial soil in which the specific cause may develop its specific effects.

1. *Symptoms of the fauces* are soreness and redness of the throat. The latter symptom may be confined to the uvula, velum palati, one or both tonsils; or it may extend all over the fauces. The redness may be of a dusky hue; mottled, or of a light mahogany or pinkish color. The parts are generally swollen; the tonsils to such a degree as even to interfere with swallowing. Usually after the first or second day we observe some small whitish-gray spots on one or both tonsils, which either soon coalesce or stay separated through the whole morbid process; or there may be a uniform deposit of this whitish-gray exudation over the entire throat. At first it is easily detached from the mucous membrane, but is soon replaced by a new deposit; later, however, it becomes thicker, more tenacious, leather like; and adheres more firmly to the subjacent tissue, leaving, if it be detached, a bleeding surface behind it. On or about the sixth day it usually dislodges itself spontaneously, and may then hang down in shreds and strings into the pharynx, or from the posterior nares down into the fauces; after which, no new formation usually takes place. In malignant cases this pseudo membrane dissolves, as stated above, into a bad-looking, ichorous mass, under which the

mucous membrane appears in decayed shreds or dark-colored crusts, and it is not unfrequent that whole parts of the soft palate become thoroughly destroyed. As regards the nature of this membrane it is believed to be more of an albuminous, whilst that of croup is more of a fibrinous character.

Diphtheritic membranes may be found also in other localities, as in the vagina; or on cutaneous surfaces, when wounded, ulcerated or abraded.

2. *Symptoms which accompany this affection of the throat are: Difficulty in swallowing*, especially *cold* drinks; this symptom, however, may be altogether wanting, even in very severe cases. *Difficulty in breathing*, especially when the tonsils are much swollen, or when the nose is filled with exudation and discharge. *A peculiar odor of brea'h*, which is more easily smelled than described; in malignant cases it becomes almost unbearable, scenting the whole room.

3 *Nasal symptoms.* Thin yellowish-white mucous discharge, at first scanty, but becoming profuse, acrid, excoriating. Epistaxis—unfavorable. The deposition of the pseudo-membrane may commence in the nostrils before any is seen in the fauces.

4. *Symptoms of the larynx.* As the disease progresses, we may observe hoarseness, total loss of voice, cough, croup, (in all its dreadful utterances,) suffocating spells; livid complexion; embarrassed, sawing respiration, up to the final fatal issue.

5. *Glandular affections.* The tonsils are almost always considerably swollen, and upon them the pseudo-membrane makes, as a rule, its first appearance. But the parotid and submaxillary glands swell also, and all the surrounding lymphatics enlarge.

6. *Brain symptoms.* In light cases the cerebral functions remain undisturbed; in severe cases we find that the mental faculties rather brighten up, except where there is a hindrance to the free circulation of blood to and from the brain by those abnormal swellings about the neck, under which circumstances the patient sinks gradually into drowsiness and stupor.

7 *Gastric symptoms.* Mostly entire loss of appetite, great thirst; sometimes vomiting of ingesta; diarrhœa. But in a number of cases there is neither vomiting nor diarrhœa.

8. *Eruption.* Rash on the skin, resembling sometimes measles, at other times scarlet fever; it breaks forth sometimes at the beginning, sometimes at a later period; in a number of cases it does not appear at all; it may last only a few hours, or remain a longer time, or reappear after having been absent for several days. It differs entirely

from scarlet fever in that, it is never followed by desquamation of the skin.

9. *Hemorrhage*, either from the nose, mouth, or fauces. A bad sign; and when occurring as a sort of *purpura*, in the worst forms of the disease, a fatal one.

10. *Urinary symptoms.* Presence of albumen is not constant; in some cases only at a later period; in bad cases it probably exists from first to last. The microscope shows casts of uriniferous tubuli, by which the so-called *Bright's disease* is characterized.

11. *Febrile symptoms* vary much in intensity. In a number of cases the height of the fever seems not at all proportioned to the severity of the attack, whilst in other cases it is ushered in from the beginning with violent fever heat, even unto convulsions. Corresponding to this, we find in many cases the pulse frequent, but weak; whilst in other cases it is quick, hard, and wiry. Very often the disease commences with chilly feelings, which are followed by heat. Mostly this heat abates in the morning, and increases again towards evening and through the night; in severe cases the fever is continuous. Its remission is scarcely ever marked by sensible perspiration.

12. *Great, characteristic debility.* Characteristic, I call it, because the disease is marked by this symptom, fully developed from the outset. Before any loss of vital fluids has occurred in any way, the patient is at once stricken down by a feeling of great prostration, showing that the disorder attacks the vital forces themselves.

Complications are said to be scarlet fever, small-pox, rheumatism, pleuro-pneumonia, and venous congestion.

Its *sequelæ* are:

1. *Anæsthesia of the nerves of sensation.* There are observations which show that it has taken months after the attack was over, before the patient recovered the normal actions of these nerves. It sometimes leaves all the cutaneous nerves in such a state that external pressure is little observed; sometimes this want of sensibility is limited to one finger. Trousseau mentions the loss of sensibility in the velum palati, which was characterized by an inability to talk clearly and to swallow. It is quite remarkable that this anæsthesia of the nerves of sensation sometimes will be interrupted by spells of hyperæsthesia, so that even the slightest external impressions become painful and unbearable. Also the nerves of special sense may thus remain impaired for a long time. Most frequently we find the nerves of the lower senses affected; taste, smell, and touch; although the higher senses—sight and hearing—are not excepted.

But all these forms of anæsthesia are less persistent than similar affections after scarlet fever, where lesions of the organs of sight or hearing are of a much graver nature.

2. *Akinesia.* The motory nerves may also be affected, such as those of the arms, lower limbs, tongue, or pharynx. There may be either hemiplegia or paraplegia. In still other cases this paralytic state may be combined with hyperkinesia, manifesting itself as trembling of the hands, or as tottering or reeling when walking; as wry neck, or as a rolling of the head by its own weight, which, when once fixed, is kept immovable.

3. *Abscesses,* which may form in different parts of the body. Most frequently the glands about the neck suppurate. Abscesses in the ears are not frequent, and in the lungs they have been observed only occasionally.

4. *Albuminuria* may continue a great while after the attack is over.

Differential Diagnosis.

1. *Tonsillitis* shows no membrane on the affected tonsil; causes more acute pain in the throat and difficulty in swallowing, and is attended by a continuous sthenic fever until the abscess breaks.

2. *Ulcerated sore-throat* is scarcely ever an acute affection; shows nothing of the characteristic prostration and nothing of the peculiar odor.

3. *Parotitis* has no skinny exudation in the fauces; neither rattling breathing nor croupy cough.

4. *Measles* observe a well-marked rhythm in their development. The rash appears at a certain time; commences first at the forehead and spreads thence gradually all over the body; the eruption forms in blotches; when pressed with the finger the resulting white spot fills from the centre towards the periphery; the fever is continuous until the eruption is all out, and then decreases. There are none of those throat symptoms in measles, and the discharge from the nose is not corroding like that in diphtheria.

5. *Scarlatina* shows no remission of fever until the eruption is fully developed. After that it generally slackens somewhat. The scarlatina eruption is always followed by desquamation, and scarlatina never runs into species of croup by a change of locality; scarlatina does not protect against diphtheria.

6. *Croup* is always a primary affection, commencing at the larynx and spreading sometimes downwards into the trachea, but not upwards.

Prognosis.

Often the mildest attacks in the commencement have resulted unfavorably. Bad signs are:

The acrid discharge from the nostrils. The invasion of the larynx or the development of diphtheritic croup. Hemorrhages from nose and mouth; purpura; petechiæ. Coldness of the external surface of the body. Albuminuria; diarrhœa and vomiting. Convulsions. Complications with scarlet fever, measles and small-pox.

Certain localities and seasons seem to be the occasion of more dangerous cases than others.

Therapeutic Hints.

Bryon., the patient is quickly prostrated, shuns all motions and complains, on moving or when being moved, of pain everywhere; white tongue; feeling of dryness in the mouth without particular thirst, or else desire for large quantities of water.

Bellad., the patient is restless, complains of sore throat; the fauces look highly inflamed; the pupils are enlarged; he feels drowsy, and yet unable to fall asleep; starts suddenly out of sleep.

Lachesis, when, after Belladonna, by next evening there is no marked change for the better; or when he is even worse in the morning after some sleep, with a decided development of those skinny patches on the tonsils, worse on the left side; or when croupy symptoms appear and the patient cannot bear any thing touching his neck and throat.

Lycop., when the aspect of the fauces is rather of a brownish redness, worse on right side, and worse from swallowing *warm* drinks; when the nose is stopped up, and the patient cannot breathe with his mouth shut; he keeps his mouth constantly open, slightly projecting his tongue, which gives him a silly expression; the nostrils are widely dilated with every inspiration; on awakening out of a short nap he is awfully cross, kicks and behaves naughty, or he jumps up in bed, stares about and knows nobody, seemingly dreaming with open eyes; frequent jerkings of the lower limbs, mostly with a groan, awake or slumbering; great fear of being left alone.

Rhus tox., when the child is restless, wants to be carried about, wakes up every now and then complaining of pain in the throat; when a bloody saliva runs out of the mouth during sleep; when the parotid glands are a good deal swollen; when there are transparent, jelly-like discharges from the bowels at stool, or afterwards.

Apis mel., great debility from the beginning; the membrane assumes at once a dirty-grayish color; there is puffiness around the eyes; pain

in the ears, when swallowing; an itchy, stinging eruption on the skin; a sensation of weakness in the larynx; numbness of the feet and hands and even paralysis. (Never does good either before or after Rhus t.)

Phytolacca, great headache, violent aching in the back and limbs; great prostration; cannot stand; when rising up in bed gets faint and dizzy.

Gelseminum, local tingling of parts during the fever; incipient paralysis or anæsthesia; defective or impaired vision; objects appear a long way off, are seen double or inverted.

Cantharides, too copious or difficult urination; the urine contains shreds or coats of uriniferous tubuli; extreme prostration, sinking, death-like turns; irritable looking rash upon the skin or shining through the epidermis.

Kali bichr., the discharge from the nose is tough and stringy; pain in the left ear; swelling of the parotid glands; croupy cough; measle-like eruption; red, raw, shining tongue; deep-eating ulcers in the fauces.

Arsen., great restlessness, constant desire for cold drink, but takes only little at a time, or better by drinking hot water; all symptoms worse about midnight.

Natr. mur., swelling of the submaxillary glands and lymphatics; map tongue; burning in the throat; after application of caustics, especially nitrate of silver. (In different regions of Pennsylvania a weak solution of kitchen-salt was used during the last epidemic as a gargle with great success)

Baptisia tinct., oppressed breathing unto suffocation because of pulmonary congestion. Rising in bed does not relieve; the patient must go to the window for fresh air.

Tart. em., difficult breathing, gasping for air; rattling in the chest; retching, vomiting of tenacious mucus; small circular patches, like small-pox pustules, in and upon the mouth and tongue; œdema of the lungs.

Ammon. c., obstruction of the nose; the moment he falls asleep he is aroused again by want of breath.

Nitr. ac., ulcers in the mouth; corroding discharge from the nose; intermitting pulse.

Bromide of Potassium and **Argentum** in cases in which there is an anæsthesia of the roof of the mouth and fauces. The first, because the old school recommend the use of it previous to surgical operations

in these parts, because "it numbs them," and the other, because I have succeeded once in curing a numbness of the fauces by it.

It is quite important that I should add to this a new theory of diphtheria, as advanced by Dr. v. Grauvogl in No. 24, &c., of the Allgemeine Homœopathische Zeitung, of 1867. Dr. v. Grauvogl contends that the so-called diphtheritic membranes consist, principally, of cells of ferment and microscopic fungi, (diplosporium fuscum,) which grow between the cells. Professor Hallier, of Jena, was the first that discovered these fungi upon diphtheritic membranes. They live and grow at first upon the decomposed particles of food, of which more or less always remain in the fauces. The fungi soon root deeper, grow into the mucous membrane, compress its minute vessels, and thus cause mortification of this structure. By the same process they may develop upon any other accessible mucous membrane, in wounds, &c. In conformity with this view, all Allœopathic authorities agree, that diphtheria originates especially in badly-ventilated localities, where large masses of decomposed organic matter are allowed to accumulate; in damp, cold, dirty, mouldy dwellings, where, consequently, there exist first-rate conditions for the production of mould. It need not surprise us that diphtheria should cause not only a local destruction, but also be attended by various constitutional disturbances, such as paralysis, &c.; as the *achorion Schönleinii*—which produces favus—is likewise followed by various general complaints.

The *contagious* nature of diphtheria seems not to be questioned. Wherever the spores of the fungi find a congenial soil, there they grow. The white or sometimes gray or yellowish-white, usually changing at last to a brownish-looking mass, which we observe in diphtheria, appears before, or at least simultaneously with, the signs of inflammation; it cannot be, therefore, a *product of* this inflammation; on the contrary, this so-called diphtheritic exudate, which is a compact mass from its very first appearance, is the *cause of the inflamed state of the mucous membrane*, and its subsequent mortification. The fungus which Professor Hallier observed in a bottle of water, in which the brush had been cleansed, after it had been used for applying nitrate of silver upon a so-called diphtheritic membrane, was not at all destroyed by the nitrate of silver, but grew in the water, and was found to be the diplosporium fuscum—whose spores assume a brown color at the time of their maturity; thus showing exactly all the changes which we observe the so-called diphtheritic membrane to undergo during the progress of the disease. For these reasons Dr. v. Grauvogl thinks that he is justified in considering the diphtheritic

plaques as a fungous growth. And this at once settles the differential diagnosis between diphtheria and croup and scarlatina, or between angina gangrenosa seu diphtheritica, membranacea et scarlatinosa. *Croup* is caused by sharp west and northwest winds from October to April, and is never contagious; its exudate appears in consequence of inflammation; first, as a fluid plasma, which gradually coagulates *upon* the mucous membrane into a compact membranous mass; never destroying or cicatrizing the mucous membrane underneath, from which it is exuded. Croup is never accompanied by swelling of the submaxillary or parotid glands; has never such a peculiar fetid breath, nor an increased flow of saliva from the mouth; neither a bloody and fetid discharge from the mouth and nose; and is never attended with a total inability to swallow, for any length of time.

Angina scarlatina is a symptom of scarlatina and is not contagious, though the fever to which it belongs is; its exudation cannot be scraped off—as can be done with the diphtheritic plaques—because it is a fibrinous infiltration into the tissue of the mucous membrane itself, not an exudation *upon* it; it never spreads to the larynx, nor to other accessible mucous membranes; nor even upon the external skin, where there are wounds, &c.

In regard to treatment of diphtheria, Dr. v. Grauvogl makes the following observations: The diplosporium fuscum belongs to the family of penicillium glaucum—common mould—as we observe growing upon bread when it is exposed to a damp atmosphere. His next object was to find out by what substance this fungus could be most easily and effectually destroyed. Accordingly, several pieces of bread had been placed in the cellar until they were covered all over with a dense vegetation of penicillium glaucum. Then he poured upon one a concentrated solution of nitrate of silver; upon the other a solution of chlorate of lime; upon the third a solution of Kali causticum; upon a fourth a solution of sulphate of copper; upon a fifth chlorate of iron; upon a sixth mercurius corrosivus; upon a seventh spirits of camphor, and upon the last alcohol. The alcohol at once caused all the fungous growth to be thrown down and totally destroyed; so did the spirits of camphor—converting them, at the same time, into an amorphous mass; but all the other substances did not seem to affect the fungous growth in the least; they ran over it, and only on deepened places, where they had to remain for a longer time, they seemed to injure the fungi to some extent. When all these different pieces were being put back again into the cellar, and were allowed to remain there for a sufficient length of time, it was observed

that no renewed growth of the penicillium glaucum had taken place upon those pieces of bread which had been treated with alcohol and camphor, whilst upon all others there was as luxuriant a growth of the mould as ever there was before; even on those places where the mould seemed to have been injured by the application of those fluids. Having thus found in alcohol and camphor the means by which the vegetable parasite can effectually be destroyed, he chooses for this purpose the alcohol, (for obvious reasons,) and orders a mixture of equal parts of French brandy and water, or of rectified alcohol and water for a gargle every hour until all traces of the diphtheritic plaques have disappeared. To prevent any painful shaking of the sore parts by gargling, it serves the same purpose to allow the fluid to come in contact with the fungous growth by taking a mouthful of it and lying on the back with the head low. A sense of smarting and burning indicates that the affected parts have been reached, and then it may be spit out again, or it may be swallowed slowly if the parasite should extend down into the œsophagus. This has to be continued until all traces of the mould shall have been removed. In those cases where the parasite has extended into the cavity of the nose and of the larynx, Dr. v. Grauvogl recommends the inhalation of alcohol by Dr. E. Siegle's inhalation apparatus. These inhalations must be continued at intervals until all signs of hoarseness, &c., have entirely disappeared. So much for the local treatment. For constitutional treatment, to overcome the gangrenous tendency, which in all cases of diphtheria is produced by the mould, Dr. v. Grauvogl orders Arsenicum[6] to be taken every hour, in four or five drop doses in a teaspoonful of water during the day. Lower attenuations cause aggravations and drug-symptoms. He still further observes: The use of alcohol alone is not sufficient to prevent the gangrenous destruction; neither is the sole use of Arsenicum sufficient to destroy the mould. Both have to be used together.

Scurvy.

The pathological character of scurvy consists in a peculiar alteration of the blood, causing a bloody serous infiltration into the mucous membrane and the submucous tissue, by which those parts enlarge, swell, and portions of them not unfrequently burst and bleed. Its seat is the mouth—principally the gums. The remaining mucous membrane is pale and of an anæmic condition, excepting, perhaps, a few patches here and there of bloody extravasations.

It commences mostly with general prostration, pale and sallow

complexion, and febrile motions. Soon the gums commence bleeding when brushed, when chewing food, or from slight pressure. Ocular inspection shows them to be swollen, receding from the teeth, and of a bluish redness. There is fetor from the mouth. The more the infiltration and swelling increases, the more this bad smell increases; presently there is a constant oozing of dark-red blood from the gums of a frothy nature, seldom, if ever, coagulating. If there be still further progress, the swelling forms an unsightly dark, livid mass, being covered sometimes with ulcers, the gums receding still more from the teeth, so that they, the latter, become loose and fall out. The roof of the mouth looks pale, as well as the remaining mucous membrane. On the tongue and inside of the cheeks, spots of bloody extravasation appear, and the whole aspect of the patient is that of anæmia. The progress of the disease is always slow; and, as it is a dyscrasia of the blood, the above given description is only a part of the morbid affection. Its manifestation in the mouth alone claims notice in this chapter; for this reason I shall not add any *therapeutic hints*, as the right remedy may be indicated by still other symptoms than those of the mouth.

Noma, Carbunculus vel Gangræna Oris.

The first symptom of this malignant but rare disease is a small blister, situated in the middle of the cheek, or toward the corner of the mouth on the inside of the cheek. It is filled with a pale-reddish or turbid grayish or brownish fluid. It bursts so soon that its formation is mostly overlooked, and appears afterwards as a superficial ulcer with an unclean basis, soon assuming a gangrenous character. Simultaneously with this blister, underneath it, a small lump is found, which may be felt even outside on the cheek, which consists of infiltrated cellular and adipose tissue. Now the gangrenous destruction goes on rapidly, and on the outside appears an œdematous swelling of the diseased cheek, often shining fatty or oily, or appearing livid, pale, or marbled. By and-by there is also formed outside, mostly on the middle of the cheek, an inflamed spot or blister upon a hard basis, which soon covers itself with a dark crust. This crust being removed, there appears under it gangrenous ulceration, like that on the inside of the cheek, which spreads with the same rapidity, destroying in a short time the greater part of the affected side of the face.

The general and concomitant symptoms seem at first to indicate nothing alarming. Generally the glands of the neck swell, and the

face has a pale, cachectic aspect. Soon, however, there is a general sinking of strength, diarrhœa sets in, and death may ensue from exhaustion, before the gangrenous destruction extends over the whole cheek.

This disease is mostly found in childhood, and always in sickly children, or after scarlet fever, measles, typhus, and sometimes after small-pox and mercurial poisoning. Adults are very seldom attacked by it, and then it appears only after typhus or puerperal fever, and especially after the abuse of mercury.

Therapeutic Hints.—The disease being of rare occurrence, our literature contains little about it. The main remedies recommended are, Arsen., Helleb., Secale, China, Carbo veg.

NECK.

GENERAL OBSERVATIONS.

Ocular inspection of the neck externally, as a whole, presents various noticeable features.

A short and *thick neck*, in consequence of hypertrophy of its muscles, is found in emphysema of the lungs; and

A long, thin neck mostly accompanies tuberculosis.

A spasmodic contraction of the neck backwards denotes meningitis, with exudation on the base of the brain.

The external jugular vein puffs out in the triangular space, which is called the interstitium intersterno—cleido-mastoideale—in all cases where the free circulation of the blood through the thoracic cavity is interfered with, as in diseases of the heart, and in consequence of continued violent coughing, screaming, singing, and the like.

The *carotid artery* is seen to *pulsate more strongly* in feverish conditions; and *its jumping pulsation* is a sign of insufficiency of the valves of the aorta.

The *acromial and supra-sternal* regions *sink in* when the upper parts of the lungs shrink; and

These regions become inflated during inspiration or expiration, when there exist emphysema or caverns in the upper part of the lungs; also, during bronchitis capillaris of little infants.

Swellings of the neck are of various nature:

They are *emphysematous* when, in consequence of internal or ex-

ternal injuries of the larynx or trachea, air penetrates into the subcutaneous cellular tissue; or when, in consequence of a rupture or laceration of the lungs, the air is forced through the mediastinum into the cellular tissue of the neck.

They are *œdematous* in case of general dropsy, or when, by tubercular or scirrhous tumefaction of the lymphatic glands, the vena jugularis or anonyma becomes compressed; this causes at the same time an œdema of the face, or of the arm.

There is *a swelling of the lymphatic glands,* either by infiltration with tubular or scirrhous masses, or by becoming involved, secondarily, in inflammatory processes of the mouth, throat, face, or scalp, of which we have spoken.

Parotitis or *mumps* appears on the upper part of the neck in front and below the ear, whilst

Struma or *goitre,* which is an enlargement of the thyroid gland, appears lower, sometimes on one, sometimes on both sides of the neck. Simple enlargement or hypertrophy of this gland is, according to Porta, found only in children and young persons, whilst in older persons *struma* is always a degeneration of this gland, consisting in formations of cysts, which contain a thick, gummy, jelly-like substance, of a yellow or brownish color, and which are known under the name of *colloids.* According to Schuh these colloids are either interspersed between the substance of the gland or they form separate round or oval appendages upon the gland, without involving the gland itself into the morbid process.

The struma of new-born children consists, as above mentioned, in a simple enlargement of either the entire gland, or of one of its lobes; and interferes, sometimes seriously, by its pressure upon the trachea, with the child's respiration. In severe cases it may produce death in a day or two, or even a few hours after birth. This is especially the case, should the swelling extend under the sternum, or the sternal portion of the clavicle, or in case the muscles underneath the hyoid bone prevent its extension exteriorly.

In regard to the *combination of struma with tuberculosis* we may say that, where *struma* is developed, these tubercular affections of the lungs may be found, but they do not reach the stage *of softening* or *phthisis,* so that struma excludes tubercular phthisis.

Therapeutic Hints.

Bell., heat and rush of blood to the head; pain in swallowing; gland painful to touch.

Brom., in juvenile subjects, with light hair, blue eyes, fair skin.

Calc. c., in scrofulous persons, worse towards new moon.

Jodium, inveterate cases; the harder they feel, and the more other symptoms are wanting, the better fits Jodium; dark hair, dark eyes, dark skin.

Natr. c., pressing pain; round, hard swelling on the upper right part of the gland.

Spongia is recommended by Hahnemann for goitre in persons who live in valleys.

Pharynx and Œsophagus.

The upper part of the pharynx we have spoken of already, under the affections of the fauces. Its lower portion being continuous with the œsophagus forms a continuous canal which conducts the food, already prepared in the mouth, into the stomach.

As these parts lie out of the reach of ocular inspection, we must infer from other symptoms what their condition is. The introduction of the probe, or probing, teaches by mediate palpation merely, whether the passage is open or closed, and, if closed, at what point. In all other respects little can be learned from this sort of exploration.

Its special affections are:

Pharyngitis, Œsophagitis, Dysphagia inflammatoria.

Exactly in the same way as the mucous membrane of the fauces is subject to catarrhal and croupous inflammations, so also is its continuation into the pharynx and œsophagus. As, however, these parts are much less sensitive than the fauces, (of which fact we may easily convince ourselves by swallowing a hot morsel,) slight inflammations are scarcely noticed. In higher degrees, however, such as are usually induced by swallowing rough, pointed bodies, scalding hot or corroding fluids, we observe a pain higher or lower in the chest and towards the back, according to the seat of the lesion. There is also difficulty or impossibility in swallowing, dyspnœa, anguish, great thirst and vomiting of slime and pus. As a consequence of such lesions we meet

Suppuration, Ulceration, Softening, Widening of the Œsophagus.

All of which, however, are not easily diagnosticable during life. Another consequence of such morbid processes is

True Stricture of the Œsophagus,

When caused by cicatrization of wounds, sores or ulcers. The parts of the organ gradually grow together and become impervious to food or drink. Then the patient cannot swallow any thing; it may go down a certain distance, but is always thrown up again; it never reaches the stomach, and the patient becomes emaciated from want of food. If such a stricture cannot be overcome, and the canal widened again by the gradual introduction of bougies, whilst the life of the patient is kept up in the mean time by injections of nourishing substances per anum, death from starvation is sure to follow. Another variety of this affection is

Stricture from Spasm,

In which the patient likewise experiences a difficulty in swallowing; the food stops somewhere in its course and is brought up again. The distinctive feature of this variety is immediate return of food; very few mouthfuls—perhaps but a single one—can be swallowed, when the food is ejected immediately; and it does not matter whether it be solid or fluid, nothing can pass until the spasm ceases.

Therapeutic Hints.

Acon., violent pain in the middle of the chest through into the back; worse from motion. When swallowing, it feels as though the food stayed lodged in the region of the heart; lying on the back is impossible.

Arsen., dryness; thirst; anguish; restlessness; burning when swallowing; food goes down only to the region of the larynx, when it is ejected again.

Bellad., pressing pain, like contraction, and a feeling as though a foreign body had lodged fast in the œsophagus.

Kali bichr., burning in the entire œsophagus; solid food is painful and difficult to swallow, leaving a sensation as though something remained there.

Lachesis, the attempt to swallow solids causes a feeling as though something had gone the wrong way, bringing on violent gagging.

Mezer., violent burning and soreness in the upper half of the œsophagus; deglutition painful and difficult, especially after the abuse of mercury.

Natr. mur., only fluids can be swallowed; solid food reaches only a

certain place, whence it is ejected with fearful gagging and suffocation; hawking up of phlegm in the morning; obstinate constipation.

Nitr. ac., in syphilitic persons.

Plumb., fluids can be swallowed without difficulty; solids come back into the mouth again. Some hours after eating, burning in stomach and œsophagus; constipation; prostration; emaciation.

Bellad., when too large a morsel or a bone incites contraction of the œsophagus and keeps it fast, Belladonna generally relieves this spasm and lets the swallowed body down.

Cicuta, when, after swallowing a sharp piece of bone, the œsophagus closes and there is danger of suffocation.

Hydrophobinum, periodical spasms of the œsophagus, with constant painful urging to swallow, but impossibility of doing it; abhorrence of fluids, especially of water; burning, stinging in the throat; cough; gagging; difficult and incorrect speech.

Hyosc., spasmodic contractions after a previous injury of the œsophagus; solid and warm food can be swallowed best; fluids cause spasms in the throat, stop respiration, talking; hiccough, nausea, spasmodic cough, and stiffness of the muscles of the neck.

For paralysis of the throat compare Bar. c., Mur. ac., Caust., Con., Arsen., Calc. c., Hepar, Jod., Veratr.

Larynx and Trachea.

Auscultation of these Organs.

On putting the ear to the stethoscope, which must be evenly placed upon the larynx, we hear the rushing in and out of the air during the act of respiration much louder than on any other place. It may be imitated by blowing with compressed lips through the bore of the stethoscope, and is called *laryngeal* or *tracheal respiration*, for at the trachea too it is heard in the same degree.

Some authors lay great stress upon the necessity of auscultating these organs. I cannot attach such great importance to it, either diagnostically or still less therapeutically. The only benefit afforded by auscultation in diseases of the larynx and trachea, properly so called, is the *capability of localizing the source of obstruction*, if there be any; but whether that obstruction arise "from inflammatory engorgement of the lining membrane, from solid effusion upon the internal surface, or from fluid effusion beneath it, or if in consequence of preceding ulceration any contraction exist, either in the rima glottidis, or in the course of the trachea, which gives rise to

constriction of the tube, and thereby impedes the free ingress and egress of air, or whether a foreign body, fixed in the œsophagus and pressing upon the trachea, or situated in the trunk itself of the air-passages, or a tumor, or a mere spasmodic action, be the cause of this constriction—auscultation telleth not. In each of these cases the noise is usually sufficiently obvious, and the evidence of obstruction is sufficiently clear, independently of auscultation. By the stethoscope we are enabled merely to say that obstruction exists and to indicate its seat; but the nature of that obstruction is not revealed by it." Hughes.

Special Diseases of the Larynx and Trachea.

Spasmus Glottidis.

In books this affection has been described under various names: *Asthma spasmodicum*, or *laryngeum infantum, asthma periodicum acutum infantile, laryngismus stridulus, laryngitis stridulosa.* The most prevalent, however, and at the same time the most inappropriate names are *asthma Millari* and *asthma thymicum Koppii.* It is quite difficult to understand how the description which Millar gives of a certain affection of children, and which he himself styles *asthma acutum*, could ever have been applied to spasmus glottidis, as it portrays quite clearly what we may express by the terms *croup* or *laryngitis mucosa.* He even recognizes the "*white, tough, jelly-like stuff*," with which the vessels of the windpipe were found filled after death.

The term *asthma thymicum Koppii* is likewise inadmissible; for the assumption which it implies, that these spasmodic fits are caused by a swelling or enlargement of the thymus gland, has, in consequence of late pathologic-anatomical researches, become quite doubtful.

The objective symptoms of *spasmus glottidis* are as follows: It commences with slight and short attacks of dyspnœa, attended by a wheezing noise during inspiration, whereby the children move uneasily and show an anxious expression. Soon all is over; and if the attacks happen in the night they may be overlooked altogether. By-and-by, however, these spells increase in number, intensity, and duration. The child is suddenly attacked after a little fright, or whilst crying, laughing, drinking, or especially in the moment of getting awake; its inspiration becomes whistling, crowing, and so difficult that it strains all the respiratory muscles to draw the air through the spasmodically-closed glottidis into the lungs. Ex-

piration is quite impossible, and thus the breathing ceases for a while altogether. The face of the child expresses the greatest agony and sense of suffocation; becomes purple; cold perspiration comes out upon the forehead; the veins of the neck become turgescent, and the thorax is motionless. The pulse falls at this stage and is small and intermitting. This fearful condition lasts in severe cases a minute or more; generally, however, only a few seconds; then, with a loud, crowing cry the child gets breath again; is exhausted; cries and sobs, but shows no signs of fever or any catarrhal affection. The number of attacks may amount to ten, twenty, even fifty, in the course of a day; and if the complaint be not arrested it may terminate in general convulsions and death.

The age in which children are attacked by this disease lies, in most cases, between the fourth and fourteenth month. In adults it is of rare occurrence, and happens only to young women as a symptom of hysteria.

Its pathological character is a disturbed action of the nervus vagus or recurrens, either from central or peripheric irritation, both of an obscure nature. Post-mortem examination shows the larynx entirely healthy.

Therapeutic Hints.

Chlorine, crowing inspiration and expiration impossible.

Cuprum, bluishness of face and lips; convulsions; after fright of mother or child.

Gelseminum, inspirations long, with croupy sound; expirations sudden and forcible.

Iodium, rachitic children; swelling of the bronchial glands; thymus gland (perhaps) enlarged.

Plumbum, spasmodic closure of the rima glottidis.

Laryngo-tracheitis, *Catarrh of the Mucous Membrane of the Larynx and Trachea.*

Catarrh exhibits everywhere the same features: hyperæmic state, abnormal secretion and swelling of the mucous membrane, casting off of epithelial cells and abundant formation of new ones. This is exactly the case in laryngitis. Its extension, however, varies; it sometimes invests only small portions, or patches; at other times the whole tract of the mucous membrane which lines the larynx and trachea, and sometimes it extends into the nose, or into the lungs.

A predisposition to such catarrhal affections seems to exist in persons who perspire easily, who are weakly, cachectic, and who keep themselves too warmly clad, or too much housed up, &c.

Exciting causes are, *all irritating agencies*, such as breathing of cold air, dust, acrid vapors, screaming, singing, &c.; *taking cold;* getting the feet cold; sudden exposure of the neck to cold air, &c.; *catarrhs, colds in the head*, influenza, which merely by spreading affect the larynx and trachea; and *some constitutional diseases*, as measles, exanthematic typhus, syphilis, and especially tuberculosis; which latter generally causes a constant disposition to "catch cold in the throat."

Its symptoms are, *tickling, burning, soreness in the larynx*, worse from talking and coughing. In cases where the covering of the epiglottis is also inflamed, swallowing is also painful.

The voice is always more or less altered, becomes deep, hoarse, or entirely suppressed. This arises from the swelling of the chordæ vocales, by which their elasticity is destroyed.

Cough, at first mostly dry, later moist; sometimes spasmodic, with dyspnœa and a hoarse sound; waking one up suddenly at night, thus simulating croup. The expectoration is in the beginning mostly thin and slimy; later, thick, muco-purulent.

Such an acute attack lasts in some cases a few (eight or nine) days; in others weeks, and in still others it becomes *chronic*, the main symptoms of which are *chronic hoarseness;* intervening coughing spells; wheezing respiration; fever, emaciation, night-sweats.

As regards differential diagnosis between catarrh of the larynx and croup, it is well enough to remember that a catarrh in the head (running of the nose) suggests a catarrhal affection of the larynx, whilst a croupous exudation in the fauces denotes a similar affection in the larynx.

Therapeutic Hints.

Acon., during its earlier state in children, after exposure to cold west wind; also after straining the voice by singing.

Bell., barking cough; waking suddenly about midnight; pain in larynx, headache, fever.

Bryonia, cough worse from motion, from entering a warm room, and with pain in the pit of the stomach.

Calc. c., in teething infants; in leucophlegmatic persons.

Carbo veg., with hoarseness, which is worse in the evening; cough coming in spells; old chronic cases.

Dulcam., when the trouble gets renewed as soon as the weather changes suddenly from warm to cold.

Hepar, cough worse in the morning; hoarseness; mucous rattling in the larynx.

Merc., chilliness; easily perspiring without improvement; cold in the head.

Nux v., in the commencement; with chilliness, headache, stoppage of nose.

Phos., constant tickling cough from the larynx, also with headache, as though it should burst; cough dry; worse in the evening until midnight; tightness across the chest.

Puls., chilly, thirstless; worse in the evening and in a warm room.

Rhus t., tickling under the middle of the sternum; worse from talking or laughing; pain in all the bones; worse when being quiet.

Rumex c., dry cough in paroxysms induced by hurried or deep inspirations, speaking, inhaling of colder air than usual, or any pressure upon the trachea in the pit of the throat.

Sulphur, in chronic cases, cough in the evening before and when going to bed; catarrh on other mucous membranes. Compare Bronchitis.

Tart. em., rattling of mucus when coughing or breathing; pulse trembling; sticky perspiration; no thirst; pale face; peevishness; drowsiness.

Croup.

This affection is an inflammation of the larynx, including the fauces and trachea, which results in an exudation that coagulates, forming a pseudo-membrane on these parts. It is therefore nearly related to diphtheria, which, indeed, sometimes extends into the larynx, causing all the various croup symptoms. It differs, however, entirely from diphtheria, in that the exudation never leaves any scars behind. It is an exudation *upon* the mucous membrane, whilst in diphtheria the mucous membrane becomes infiltrated by it; and, in severe cases, the mucous membrane, as well as the submucous tissues, is destroyed, leaving cicatrices on healing. Croup may commence in the fauces, and extend downwards; or in the larynx, and spread upwards. In almost all cases there is, accompanying croup, a hyperæmic state of the whole mucous membrane of the bronchial tubes, a bronchial catarrh, circumscribed pneumonia, or vesicular or interstitial emphysema.

Ocular inspection reveals the pseudo-membrane in the fauces, if it commences there first; auscultation, however, reveals nothing but what we can hear, even at a distance,—labored breathing, with a sawing sound.

Croup generally attacks children in early childhood,—from two to seven years.

Symptoms.

Premonitory signs are sometimes peevishness, feverishness, soreness of the throat, inflammation of the tonsils and fauces, with patches of exudation, as in diphtheria. In just as many other cases there are no such forebodings.

The child is aroused suddenly out of a sound sleep, generally about midnight, by a hoarse, dry, croupy cough. It exhibits restlessness and fright, puts its hands to the windpipe. Soon, however, it falls asleep again, to be again roused by the same dry, hoarse cough, alternating in this way until morning, when usually a remission of these symptoms takes place, and the child seems to be lively and playful. When evening approaches, the child becomes worse again, and, in addition to the cough, we observe the breathing to be getting impeded between the coughing spells. Not only can we see the labored action of the respiratory muscles, but we can also plainly hear a sawing noise, which the ingress and egress of the air causes in the stuffed-up air-passages. This difficulty increases from hour to hour. The child involuntarily bends its head and neck backwards, in order to free the windpipe as much as possible from all pressure; the alæ nasi move strongly up and down like wings; the epigastric region does not, as is usual during the act of inspiration, bulge out, but is drawn in, in consequence of a deficiency of air in the lungs on account of the obstruction in the larynx. For the same reason we find the xiphoid process and the cartilages of the lower ribs during inhalation drawn strongly inwards, instead of gliding gently downwards, as is natural. When we find inhalation and exhalation equally difficult, there is surely coagulated exudation around the glottis; when, however, as is sometimes the case, only the *inhalation* is difficult and *exhalation* easy, it is a sign that the difficulty does not lie in the presence of a pseudo-membrane, but in a paralytic state of the muscular structure of the glottis; whereby the epiglottis, during inspiration, is not lifted up from the glottis, thus hindering the free ingress of air; whilst during exhalation the paralyzed parts easily give way to the returning stream of air.

Thus the child struggles terribly for air; raises up, wants to be carried about, until from sheer exhaustion and the poisoned state of the blood, by carbonic acid gas, it sinks into drowsiness and stupor. The face being at first red, grows pale, finally cyanotic, covered with cold sweat; the pulse, at first quick, hard and strong, grows very frequent, small, irregular, intermitting, until at last this fearful scene is closed by a gradual general paralysis or suffocation.

In those cases in which dissolution of the false membrane, or the tearing, loosening and ejection of it, permits recovery to take place, we frequently find a long-continued hoarseness, which is caused by a catarrhal affection of the larynx, or bronchitis or pneumonia—complications which have, indeed, been already existing during the whole attack, and which made it only so much the more serious.

Therapeutic Hints.

Aconit., high fever, dry skin, restlessness; the child is in agony, impatient, throws itself about.

Arsen., worse about midnight; great restlessness; bloated face, covered with cold perspiration.

Bromine, when, after Spongia, aggravation occurs again next evening; especially in children with blue eyes and light hair.

Hepar, cough worse in the morning; mucous rattling and yet no getting rid of the phlegm; hoarseness, or dry, barking cough; the child cries when coughing; after exposure to cold west wind.

Iodine, as Bromine follows well after Spongia, so does Iodine after Hepar; cough worse in the morning, rattling and no getting loose; hoarseness; especially in children with black eyes and dark hair.

Kali bichr., worse early in the morning; inflamed fauces; membranous deposition; hoarseness.

Lachesis, the child cannot bear any thing touching its neck; aggravation in the afternoon; after sleep; patches of exudation in the fauces; commencing paralysis of the lungs.

Phos., when there is a combination with bronchitis; great weakness.

Spongia, very dry; crowing sound of cough; always commencing to get worse in the evening; sawing sound, also, during remission.

Tart. em., face cold, bluish, covered with cold perspiration; pulse very frequent; rattling in the chest; great sinking of strength.

Œdema Glottidis.

According to pathological anatomy, this is a dropsical infiltration into the submucous cellular tissue of the glottis, epiglottis and the

adjoining ligaments. It is mostly a collateral œdema of some inflammatory processes in the larynx, either acute or chronic; such as ulcers of different nature, syphilitic, tuberculous, &c., or accompanying smallpox or typhus; but it is likewise found as part of general dropsy in consequence of kidney diseases or scarlet fever. Its occurrence is much more frequent in grown persons than in children.

Post-mortem examination has frequently revealed œdema and infiltration at and around the introitus laryngis, without any previous indication of such affection during the life of the patient. Its inconvenience and danger arises from the degree of swelling, by which respiration is more or less impeded. It may in some cases increase so extensively that the glottis becomes entirely closed, and death ensues in a short time in consequence of suffocation.

Symptoms: difficulty of breathing, which may increase to the extent of making respiration possible only by the most desperate exertion. The inhalation is slow, difficult, whistling, whilst expiration goes on much easier and without any noise. The reason of this is, that during inhalation the air presses the swollen parts around the introitus laryngis together, thus closing its aperture, whilst during expiration the outrushing air drives the swollen parts asunder, thus removing the obstacle. If, however, the glottis and the internal parts of the larynx themselves are infiltrated, there will not be much difference between the facility of inspiration and expiration, the obstacle to both being, in such cases, alike. To make the diagnosis still more certain, it is necessary to examine the parts. The patient should, whilst a strong light is directed into his mouth, put his tongue out as far as possible; then he is made to gag by pressing the tongue tightly with a spatula, near its root. At this moment the larynx rises, and we are enabled to see the existing swelling at and around its aperture. This settles the question.

Therapeutic Hints.—Difficult inspiration and short, easy expiration indicates **China**, Ign., Staphis., and **Stramonium**, of which China and Stramonium are, perhaps, the most important.

Compare, also, Apis, Ars., Arum. tr., Laches.

THORAX.

This is a chapter of great importance, and at the same time of difficulty. Its exploration we will have to undertake on different roads. We must know what is to be learned by *inspection, palpation, percussion,* and *auscultation.*

I. Inspection—Ocular Examination.

If we consider that the thoracic cavity holds within itself the lungs and heart, the organs of respiration, and of circulation, we shall understand why it is that the first phenomenon which strikes the eye is the *continuous motion* in which we find its walls engaged.

This *respiratory motion* of the chest in *men* is greatest in the region of the lower ribs on each side; in *women,* on the upper part of the chest; and in *children,* towards the abdomen.

The number of respirations varies according to age, sex, and individuality; so that we might put down the normal number of respirations per minute in grown people at from twelve to twenty; in young persons, from fourteen to twenty-four; in children, about twenty-six, and in infants about forty-four. But there are other conditions which may materially modify the frequency of respirations—such as mental excitement, bodily exertions, digestion, temperature, and other conditions of the air. As a rule, however, if compared with the pulsations of the heart, it may be said, that during one respiratory act there are three or four beats of the heart; but these respiratory motions of the lungs and pulsations of the heart never correspond in rhythm, as you may easily ascertain by counting your pulse, and observing your breathing at the same time, the pulse being a little too fast or a little too slow to make up an even count between respiration and pulsation. This is a very interesting fact, which it is well to bear in mind. When respiration and pulsation become *synchronous*—that is, when upon each act of respiration for a length of time fall precisely two, three, four, five, or six pulsations—we may be pretty sure that death is near. My attention was first drawn to this interesting fact by Dr. Hering. Since then I have found it verified many times. Its explanation is another matter. We might, perhaps, explain it, if we remember that the heart's action is governed mainly by the *sympathetic nerve,* whilst the lungs are under the control of the *vagus,* though each of them sends branches to the other organ, the sympathetic to the lungs, and the vagus to the heart. The sympatheticus is the great nerve of organic life, and

under its direction all the functions of the body are performed, which are entirely out of the reach of the will. It arises from a series of ganglia, extending along each side of the vertebral column from the head to the coccyx. The vagus has its origin in the brain, and its fibres may be traced through the fasciculi of the corpus restiforme into the gray substance of the floor of the fourth ventricle, and therefore the parts to which it is distributed are more or less under the control of the will. When death approaches, or, in other words, when the separation of soul and body commences, those functions which are more or less under the control of the will are most probably the first to cease. The vagus losing its influence upon the lungs, their action is now continued under the sole direction of the sympatheticus as long as organic or vegetative life still continues; thus respiration and pulsation act in full harmony—become perfectly *synchronous*.

"The respiratory motion of the chest itself in ordinary health is comparatively slight, in consequence of the thoracic cavity being enlarged in every direction nearly simultaneously. It resembles the easy ebb and flood of a soft wave. When, however, a deep respiration is taken, it is observed that the sternum is slightly but steadily projected forward, the abdominal parietes gently dilated. The lower ribs are first and most considerably raised, and the elevation of each separate rib takes place gradually, evenly, and regularly upwards, notwithstanding which, each and all *appear* to move at the same time. Every part acts separately, but each in perfect harmony with the other." Hughes.

The *form* of the thorax must also be taken into consideration, and this must always be done by comparing one side with the other. In this way, if we bear in mind the natural motion and the natural shape of the thorax, ocular inspection will reveal the following noticeable facts:

1. The upper ribs sink away from the clavicle, become flattened and motionless, while, in many cases, the movement of the lower ones is not interfered with, and, as a general rule, the change is more evident on one side than on the other. This is a sign of *advanced phthisis*. Barclay.

2. The chest is full and rounded; the ribs stand out, but have a very slight range of movement, and the inspiratory effort is marked by powerful traction of the muscles of the neck; the movement of the lower part of the chest is very often *inward* in place of *outward*, during inspiration (Barclay.) These are some of the physical signs

of *emphysema* of the lungs, that morbid state in which the volume of the organ is increased in consequence either of the dilatation of the air-cells or, what is of rarer occurrence, of the escape of air into the space between the lobules or beneath the pleura.

3. Only one side bulges, the intercostal spaces are obliterated and the respiratory motion is annihilated. This is a sign of *hydrothorax*—a collection of serous effusion—or a sign of *pneumothorax*—a collection of gas or air into the pleural sac.

"But in many advanced cases of pleuritic effusion, of empyema (collection of pus) and of pneumothorax, with effusion, not only, as before stated, is the side *not* enlarged, but it is, on the contrary, contracted; and not only are the intercostal spaces not widened and prominent, but they are actually much narrowed. Herein exists a notable example of that which is so necessary to bear constantly in mind, that the results of one mode should be carefully compared with those deduced from other modes of physical examination, and the whole weighed together with the observations derived from the history and the constitutional symptoms of the case under examination. Because the side is contracted, and the intercostal spaces narrowed, as observed upon inspection, it might be hastily assumed that there was no fluid in the chest, while in truth the contracted side might be actually filled with pus or serum, and the other, supposed from its greater size to be the one diseased, might be quite healthy." Hughes.

4. A general fulness or roundness of the precordial region may be sometimes observed. This is the case when the heart has been enlarged for a considerable time, or when fluid effusion has long existed in the pericardium. *Nota bene:* A broken rib may bulge out too!

5. Without any deviation in form, a remarkable stillness and want of movement may be observed either of a whole side or only a part of it. This is a sign of inflammation of the pleura in its early stage.

6. The *thoracic breathing,* when the diaphragm is not moved, is a sign of *peritonitis;* the *abdominal breathing,* when the ribs are not moved, is a sign either of inflammation of the chest, or of paralysis of the respiratory nerves, except the phrenic, from injury of the upper part of the spinal cord.

II. Palpation—Manual Examination.

This is a method of using the hand with its sense of touch, for the elimination of certain conditions of the thorax. We may merely tap with one finger, or lay the whole hand upon the parts to be examined. press or glide gently over the surface, according to the require-

ments of the case. In this way we become cognizant of *temperature, form, resistance and motion* of these parts.

The *temperature,* if raised to *calor mordax*, fairly burns and stings the examining hand, and is found on the chest in far advanced pulmonary complaints.

The *form.* When it is inconvenient to expose the chest of a patient, the appressed fingers of one hand placed flatly and pressed firmly upon the infra-clavicular region of one side, while the other is similarly placed and pressed upon the corresponding region of the other side, are often capable of distinctly appreciating a flatness of one side, or a difference in the pliability or expansibility of the two sides, even in the early stages of phthisis.

The *resistance* depends upon the character of the parieties and the contents of the thorax. The resistance of the parieties is greater, the more convex, stiff and strong the thoracic bones, and the narrower the intercostal spaces are. It is more yielding where the contrary conditions exist. In the acromial region the resistance to pressure increases when the muscles are put upon the stretch. The resistance of the contents of the thorax increases *in the ratio as they are compressed.* Whether there be much or little air, water or pus collected in the cavity, it has no influence upon its resistance to external pressure. But when this air, water or pus becomes *compressed*, and in consequence the walls which contain it are put upon the stretch, its resistance increases in the same ratio, and such swelling within the chest may feel as hard as a stone. *Hepatization* of the lungs gives a considerable resistance, but it is greater in exudations under the above-mentioned conditions.

Palpation lastly reveals different kinds of *motions* which originate within the cavity of the chest. The most important of them is the *vibration of voice*, or the *vocal fremitus*, of which we become cognizant by placing our hand upon the thorax of a person who is in the act of talking or singing. Its force corresponds with the power and depth of the voice, so that we feel it much stronger in men of a deep base voice than in other persons, whose voices are of a higher pitch. Singing and screaming causes fremitus even in the highest-toned voice. The *localities* in which it is perceived, arranged according to the strength of the vibration, are as follows:

1. *Larynx and trachea down to the sternum in front and laterally.*

2. *The last four cervical and first three dorsal vertebræ of the adjacent portions between the scapulæ*, especially in thin persons and children.

3. *The acromial and subclavian regions down to the liver and spleen,* on the *right* side much stronger than on the *left.*

4. *The lateral regions, from the axillæ down to liver and spleen;* to the fifth rib stronger on the *right* side; *below* the fifth rib stronger on the *left* side.

5. *The posterior inferior regions from the edges of the shoulder-blades downwards.*

6. *The shoulder-blade region.*

7. *The manubrium sterni.*

8. *Where the liver or the enlarged heart or spleen lie close to the thoracic wall,* the *fremitus* is *not felt at all.*

The mammæ of women decrease the vibration of the voice, but do not suppress it altogether. In thin persons with a long thorax, the fremitus is stronger than in persons with a broad but short thorax. It is felt more in the horizontal than in the upright position. This is its normal condition in health.

In *disease* it may be *increased* or *decreased.*

It is increased when the bronchial walls become thickened by chronic inflammation; or when the lungs become hepatized, or infiltrated with tubercles, or indurated and consolidated. It is also increased by cavities, which lie near the periphery, contain no air and not much fluid, and which are surrounded by walls of good conducting quality; in short, *its increase depends upon good conductors of vibratory motions.*

The fremitus is decreased by the presence of large abscesses or gangrenous destruction or softening of the substance of the lungs; it is decreased or even suppressed when gas or serum fills the pleural sac; and it is decreased when the bronchial tubes are filled with mucus, pus or blood; in short, in all cases *where the vibratory undulation has to pass through different media, air, fluids and solids.*

For here, too, is the physical law of the conducting of sounds applicable; *the more equal the media in respect to density and elasticity, the better do they conduct sounds; the greater their inequality of substance, the less is their conductive power.*

Another vibratory motion within the cavity of the chest, which manifests itself to manual examination, is, *the rhonchus vibration,* caused by tough mucus lodged in the larynx, trachea or bronchial tubes, and brought into vibratory motion by the ingoing and outgoing current of air. This vibration very often extends over the whole chest, although only a little tough phlegm may be the cause of it, which can be thrown off by a single cough.

When, however, the cause of this vibration consists of phlegm lodged in the bronchial tubes, the rhonchus vibration is not felt in the trachea and larynx, but may extend all the way down to the bronchial

periphery. For this reason we can never judge from the extension of the vibration to the extension of its cause; in other words, it does not follow that because we feel the rhonchus fremitus all over the chest, that there should be phlegm all through the chest. This would be a mistake which could be made only by those who do not understand the propagation of rhonchus vibration.

A third vibratory motion, recognizable by manual examination, is *the peculiar rubbing or grating feel,* which occurs when the surface of the pleura pulmonalis and costalis—which naturally glide smoothly upon each other—are roughened by solid effusion between their contiguous surfaces, as in pleurisy. It is mostly of short duration, but may last in some cases months, and even years. The same motion is caused by fibrous deposits within the pericardium, in consequence of pericarditis; it resembles very much the purring of a cat.

A fourth motion which the examining hand discovers upon the thoracic walls is *the pulsations of the heart.* "While the body is erect, the heart, when in a natural condition, is constantly felt to strike the parietes about an inch below and to the inner side of the nipple. While lying upon the back, its impulse is greatly decreased, and is usually felt somewhat nearer to the sternum. When the body is turned to the left side, the impulse is felt in a direct line with, or often nearly an inch to the outer side of a line passing vertically over the nipple; while, on the contrary, when the body is turned to the right side, it is felt between the cartilages of the ribs, close to the sternum, or sometimes cannot be felt at all.

"When the parietes of the heart are thickened, or hypertrophied, and the force of its impulse is consequently increased, the hand, placed over the precordial region, becomes at once sensible of its abnormal force, though the pulse at the wrist may at the very same time be small and feeble.

"When the cavities of the heart are dilated, with or without any increase of the thickness of their walls, the impulse is often perceptibly extended over a larger space than natural, and may be felt not only above, below, and around its ordinary site, but also in the scrobiculus cordis; and sometimes even on the right of the sternum. It must, however, be recollected, that in nervous and excitable persons of spare habit, the impulse of the heart is often very extensively diffused, even when no disease of the heart exists; and, therefore, that a widely-extended or diffused impulse is by no means a proof of the existence of disease in the heart, or in any other organ.

"When the heart is removed from its natural situation by gaseous

or fluid effusions into the pleura, by tumors, abscesses, &c., it is by manual examination that the fact can generally be best determined.

"When obstruction exists in the valves, a trembling motion or 'purring tremor' is frequently communicated to the hand, and the tumultuous action, or trembling motion, existing in the more advanced stages of disease in the heart, can often be best appreciated by palpation." Hughes.

III. Percussion.

A casual examination of the different works on this subject is amply sufficient to cause total confusion in the mind of the beginner, and a loathing of the task of wading through such contradictory assertions of the different authors. For whilst the one pretends to hear the grass grow, and to find out every little nook and hook in the lungs, if wrong, by knocking, another asserts coolly, that such talk is a mere flatulent phraseology, referring simply to the fact that the most skilled and experienced in this knocking art themselves confess to having made the most glorious mistakes.

What are we to do then in such a perplexing position? Shall we throw the whole overboard, as a fashionable craziness of the profession? It would be a short process of getting rid of the trouble. But then, that is not the thing. There has been so much labor and ingenuity bestowed upon this subject, that there must be some guiding truths in this heap of collected experiments and researches; no matter if it be mixed up with contradictory assertions.

In the following pages I shall try to state the fundamental principles, which may easily be amplified by our own personal observations.

There is an *immediate* and a *mediate mode* of percussion. It is *immediate* when the finger of the examiner strikes directly upon the parietes of the chest. It is *mediate* when some solid material, such as a disc of wood or ivory, a piece of leather, or the finger of the left hand, is interposed between the parietes and the striking body.

The striking body may be *one* or *more fingers* pressed together and bent slightly; or a little steel hammer, whose head or striking surface is covered with leather or caoutchouc.

In regard to the merits of these different modes I have to say that much depends upon what we may have got accustomed to; still the one or the other may be preferable under certain circumstances, which practice will soon teach.

What does percussion reveal?

If we strike different things we receive different sounds. There is,

however, a marked difference between those bodies which contain *air* and such as do not. As extreme examples of this difference we may cite the sounds which we obtain when we percuss the *chest* or *stomach*, and when we percuss the *thigh*. In the first case we obtain a sound which *reverberates*,—has *resonance*; whilst in the other case we hear a mere noise, a clap, without any resonance or tone whatever. This latter, which we may call the *dull, dead* or *fleshy sound*, is everywhere the same, where we strike upon an organ not containing air; such as the liver, the spleen, the kidneys, hepatized lung, or lung completely deprived of air by compression and fluids; a hard liver yields the same sound as a soft liver, a hard spleen as a soft spleen.

But it is different with such organs and bodies *as contain air*; there the sound varies quite considerably. Take for example an open jar or bottle, and percuss it at its mouth, you will hear a sound similar to that of a drum; this is the sound which Skoda has called the *tympanitic sound*, and which we also might call *drum sound*. Its variations are as follows:

1. If we percuss an open jar or bottle, this drum sound will be *deeper*, the *higher* or *longer* the bottle or the column of air which it contains; it will be *higher*, the *shorter* the column of air is within.

2. If we percuss an open jar or bottle, we find that the *wider* the mouth of the vessel, the *higher* is its tympanitic tone; and, the more we contract the mouth of the vessel, the *deeper* becomes this tone.

3. If we however percuss *closed cavities*, there comes into consideration another momentum. A drum or jar, whose mouth is closed tightly with a piece of bladder, can exemplify it. We perceive at once that the *tenser* the skin is drawn over the drum or the bladder over the jar, the *higher* becomes its tympanitic tone, and *vice versa*, the *looser*, the *deeper*. Here, however, it must be remarked, that this comes to pass only when the surrounding air and the air within is of equal density and expansion. As soon as either is set out of that equilibrium, just as soon the tympanitic sound is lost, because this diversity hinders the regular vibrations of the membrane, which are necessary for the tympanitic sound.

Thus we find that the tympanitic sound varies in height and depth of its tone. It becomes *higher* in the ratio—

1. That the column of the percussed air is shorter;

2. That the mouth or aperture by which the percussed air stands in connection with the external air is wider; and

3. That the enclosing membrane is drawn tensely over the cavity.

It becomes *deeper* in the same ratio—

1. That the column of the percussed air is longer;

2. That the mouth or aperture by which the percussed air is in contact with the external air is narrower; and

3. That the membrane which closes the vessel is looser.

Applying these physical rules to the living organism we come to the following results:

1. *The tympanitic sound is heard at the larynx.* The *wider* the person under examination opens his mouth the higher is its tone; in closing the mouth it becomes deeper and weaker, and when closing the nostrils also it becomes still deeper and weaker.

2. *The tympanitic sound is heard where there exist superficial cavities in the lungs which contain air.* If it happens that such cavities are in immediate connection with the trachea, larynx, and mouth, by means of large bronchial tubes, then we have the same phenomena in opening and shutting the mouth, as above detailed. In opening the mouth the tympanitic sound has a *higher,* and, when shutting it, a *deeper,* tone. If the cavity is in no such connection, then opening or shutting the mouth does not alter the tympanitic sound.

3. *It is heard on the thorax in all those conditions of the lungs in which the external air presses equally strong within upon the substance of the lungs, by means of its air-cells and bronchial tubes, as it does from the outside upon the thorax;* that is, *where there is a perfect equilibrium between the pressure of the internal and external air.* This, however, in a normal state is never the case. The inner pressure of the air is like the external *minus the contractility of the pulmonary tissue.* But disease may deprive the lung-tissue of this elasticity and contractility by compressing it, whereby this equilibrium becomes established. This, we find, for example, in partial emphysema, in the neighborhood of infiltration as happens in pneumonia, where, not unfrequently, the tissue around the hepatized portion, and especially at the borders of the lung, is emphysematous. In this condition we hear a decided tympanitic sound, whilst in pneumothorax—a collection of air or gas in the pleural sac—we hear none. Especially is this the case when the thorax is much distended; although we might be inclined to expect it more than under other conditions. We hear it again distinctly and invariably at *the upper portion of the chest, when the lower portion of a lung is entirely compressed by any pleuritic effusion and its upper portion is reduced in volume.*

4. *The tympanitic sound is heard lastly in those parts of the chest in whose neighborhood the stomach lies,* namely, the lower part of the left mammary, left lateral, and left infra-scapular regions, *provided* the

stomach be not too much distended with air, because otherwise a regular vibration of its walls would be impossible, and hence also the tympanitic sound.

The same is true of the abdomen; and thus we come directly to the following result: *The tympanitic sound on percussion is heard at the larynx; at the collapsed or compressed lungs; at the relaxed stomach, and at the compressible abdominal walls.*

Quite different from this tympanitic sound is another sound elicited by the percussion of bodies containing air: *the non-tympanitic sound of Skoda,* which we might just as well, and perhaps more intelligibly, call *the resonant sound of the lungs*, or, by abbreviation, *lung-sound.* The best example of this sound is obtained by percussing a healthy thorax; and, in doing this, we perceive at once that there are different degrees of the resonance in it. It varies in clearness from a very resonant to a muffled sound; and, in duration, from a long resonance to a short snap.

In the normal state of the lungs we find this sound *very resonant* in the superior sternal, the axillary, and the upper part of the infra-scapular regions; *resonant* in the subclavian, the upper part of the mammary, and lateral, and inter-scapular regions; *muffled* in the acromial, and the lower part of the right mammary, and lateral, infra-scapular, and scapular regions; *dull, dead, fleshy* in the inner edge of the left mammary, (where the heart lies,) the liver, spleen, and kidney regions.

Pathological altered states of the lungs alter also this natural resonance of the percussion sound.

It is muffled, dull—

1. On any portion of the lung which is deprived of air, if it be about the size of a half dollar, and about half an inch in thickness.

2. In the subclavian regions from tubercular infiltration.

3. In the inferior posterior regions, as the favorite seat of pneumonic hepatization; but other parts are not excluded from the same cause.

4. Diffused over a considerable portion of the chest in hemorrhages and destructive processes within the substance of the lungs.

5. In malignant diseases of the lungs, where the pulmonary tissue is pushed aside and the air is excluded from the parts affected by cancerous or fungous growth.

Diseases of the *pleura* cause a *dull percussion sound—*

1. "In pleuritic effusion, no matter whether the fluid be blood, serum, or pus. The dulness in either case may, and generally does primarily, affect only the lower part of the serous cavity, gradually extending upwards as the fluid increases, and by its increment displacing

the lung. But it may also, on the contrary, in either case, extend over only a limited space, to which it is confined by previously existing pleuritic adhesions.

"When the pleura is free from such adhesions, the fluid, from whatever part of the membrane it proceeds, may in each case gravitate to the lowest part of the cavity, and its site may be changed according to the varying position of the patient's body. In each case, therefore, the part in which the dulness is observed may also vary with the changes of position. This change in the situation of the fluid and of the consequent dulness, according to the position of the body, is, however, far more common in hydrothorax than in either simple pleuritic effusion or empyema, in which diseases the fluid is much more frequently confined to a limited space by surrounding adhesions, or gravitates with less facility." Hughes.

2. "*In malignant disease of the pleura*, as in that of the lung, the pulmonary tissue is pushed aside, and dulness and resistance exist on percussion commensurate with the extent of the solid deposit." Hughes.

The metallic ringing percussion sound. This is the same sound which we elicit by striking empty or nearly empty vessels. The presence of water is not required, but does not hinder its production. According to Wintrich it originates in smooth cavities, where the vibrations of the sound are reflected from wall to wall in a regular manner. It is heard in pneumothorax, over large cavities, and such cavities as are connected with each other, whose walls must be fit for the reflection of sound; that is, they must be smooth and curved.

The cracked-pot sound is similar to the metallic ringing sound, only not so perfect—a spoiled metallic ringing. It may be produced on any healthy chest by knocking forcibly with the fist against the sternum during loud speaking or singing. It is said to be found where cavities exist, but Wintrich says: "It is rather a feeling of disappointment for the physician, when he stands by the deceased body of a patient during whose illness he many a time observed this sign and diagnosticated a cavity in his lungs, and yet does not find now any thing the like." For this reason we ought not to attach much diagnostic importance to this sound.

IV. Auscultation.

You may auscultate a patient either by applying your ear immediately to his chest, or by interposing a stethoscope between it and your ear. The first is called *immediate* and the latter *mediate auscultation.*

Much has been said in books about the superiority of each method

over the other; but there is no need of such long disquisitions. I hear best with the naked ear, and so will any one else who faithfully tries both methods. But I prefer the stethoscope decidedly, if I have to examine an unclean person, or a person with skin disease; or in cases where great delicacy must be observed, or when I cannot easily apply my ear to the parts to be examined.

There has also been a great talk in books about the form and material of the stethoscope. It is all the same, whether it be made a little shorter or longer, straight or bent, out of one piece or of several pieces of wood or metal, if only its bore be smooth and adapted to conduct and reflect the sound perfectly. That is all that is required.

In order to know any thing about abnormal sounds in the respiratory organs, we must first become acquainted with those sounds which we can hear in a normal state of these organs.

The Normal Sounds of Respiration.

They must be distinctly considered as *inspiratory* and *expiratory sounds.*

The *inspiratory* sound heard at the *larynx*, *trachea* and *large bronchial tubes* may be imitated by forcing air against the hard palate, as is done involuntarily in hard breathing, or in pronouncing the guttural consonant *ch.* The height or depth of this sound (its pitch) depends upon the width of the opening through which the air passes. This sound is called *bronchial respiration* or *tubular breathing*, and is found in a normal state at the larynx, trachea, large bronchial tubes under the upper part of the sternum, the inner side of the subclavian, the inter-scapular regions, and occasionally, though less distinctly, in the axillary regions, especially the right one. It is loudest in the larynx, less loud at the trachea, and still less loud at the superficial bronchial tubes, sounding as if coming from a distance. If this bronchial or tubular breathing be heard in other localities than the above-named, it may, with tolerable certainty, be regarded as morbid.

The *expiratory* sound heard at the larynx is nearly as long, and generally somewhat *stronger*, than that of inspiration.

An altogether different sound is heard during *inspiration*, when we put the stethoscope upon any other part of the chest than those previously specified. It may be imitated by narrowing the opening of the mouth and then drawing in the air. The consonant of this murmur is *v* or *b*, and it is called the *respiratory* or *vesicular murmur of the air-cells and finer bronchial tubes.*

"It varies considerably in intensity in different regions of the chest. It is most distinct in the *acromial, the central and lower part of the superior sternal, the subclavian, the axillary* and the *subscapular regions.* It is less distinct in the lateral, the right mammary, the scapular regions, still less in the hypochondriac, and least of all in the inferior sternal and the inner part of the left mammary region.

"Independently of the variation of the intensity of the sound in the different regions of the chest, whether the variation arise from the position of the organs, the amount of pulmonary tissue beneath the ear, or the facility or difficulty with which the inspired air reaches the pulmonary cells, the two sides of the chest frequently vary a little in respect to the loudness of the respiratory murmur. Thus it is rather louder in the acromial, scapular and infra-clavicular regions of the *right* side, but in so slight a degree as to be scarcely worthy of consideration in a practical point of view.

"The respiratory murmur may, both locally and generally, be more or less loud than natural in persons who are quite free from any appreciable disease. It may also be harsh or rough, scarcely audible, or altogether absent. Thus, in childhood and in youth, the respiratory murmur is louder than in adult life, and especially than in old age. From this circumstance a loud inspiratory murmur is called (whether normal, as in childhood or youth, or abnormal, from any cause, in age,) *puerile* or *supplementary respiration: puerile,* because it is the normal state of respiration in children, and *supplementary,* because it is thought that when one lung or a part of a lung is disabled, the increased activity of the other lung, or another part of the same lung, *supplies* the defective action of the diseased organ or part.

"It is always heard when the healthy respiration is more than ordinarily active, as in persons 'out of breath,' as it is called, from strong exertion, as running, dancing, &c., or after the respiration has been voluntarily suspended for a time, and the individual breathes quickly to restore the normal balance of the circulation through the pulmonary organs; we hear it, therefore, also after the sudden termination of an asthmatic paroxysm. The strength of the inspiratory murmur, instead of being *increased,* may be *diminished,* though no disease exist in the chest. This imperfection of the respiratory murmur is usually observed either in parts of the lungs which have been little used, as in the lower regions of the chest of females accustomed to tight lacing, or in persons suffering from deformity, whether congenital or acquired; or in the chest of persons considerably advanced in life. In the first two mentioned cases the defect

results from *want of use* and consequent *imperfect expansion* of the lung. In the last case it proceeds from *atrophy* and consequent defective *functional activity* of the pulmonary tissue. It may, indeed, be regarded as the natural character of the respiratory sound in old people, and may therefore be called '*senile*,' as that existing in childhood is termed '*puerile respiration*.'

"Occasionally the inspiratory murmur is entirely absent from one or a part of one lung, though *no* disease be present in the organ itself. This condition, however, probably never exists without some mechanical obstruction to the ingress of air, either in the air-tubes or upon the exterior of the organ, (spasm, foreign body, apparent death.") Hughes.

The murmur of expiration in the normal state of the respiratory organs causes little or no sound in the air-cells and finer bronchial tubes; whatever sound is heard differs from the murmur of inspiration, and resembles rather a gentle aspiration or blowing. It can be imitated only by the mouth during expiration; the consonant which represents it falls between *f* and *h*.

Lænnec and Skoda attribute the sound of the vesicular breathing to the friction of the air against the walls of the finer bronchial tubes and the air-cells, the contractile power of which it has to overcome. The reason why the *inspiratory* murmur of the air-cells is much louder than the *expiratory* is, that the air, when it enters into them, meets with resistance from their contractibility, but does not meet with any in its passage out of them. It is otherwise, however, with the large bronchial tubes, and particularly with the trachea and larynx; here the air, during inspiration, meets with no opposition; it has, indeed, rather a tendency to expansion; but during expiration the stream of air coming from all parts of the lung out of the air-cells, collecting in the trachea and larynx, becomes compressed and causes friction on the walls of this tube, and especially in the narrow glottis; hence, the *expiratory* murmur of the *larynx*, *trachea*, and *large bronchi* is, as a rule, *louder* than the *inspiratory*.

Pathological Deviations from the Normal Vesicular Respiration.

1. *The inspiratory murmur.* The *presence* of the vesicular murmur at any part of the thorax indicates the entrance of air into the air-cells of that part of the lung which lies beneath the spot indicated. Its *absence*, therefore, indicates those abnormal conditions which prevent the passage of air into the air-cells: such are *compression of the air-cells* by exudations or tumors in the pleura; by enlargement of

the heart and other diseases; *infiltration of the lung tissue* by plastic or tuberculous matter, by blood, serum, pus, &c.; *atrophy of the air-cells and obstruction of the bronchial tubes* by mucus, blood, or by swelling of the mucous membranes.

The vesicular murmur becomes *harsher*, when the lining membrane of the air-cells and finer bronchial tubes becomes roughened, swollen, and thickened. The presence of a *harsh* vesicular respiration, which may amount sometimes even to a *hissing sound*, indicates, therefore, *a swelling of the mucous membrane of the finer bronchial tubes and air-cells*, as exists in catarrh; or *solitary tubercles thickly scattered through the tissue of the lungs*; and *œdema of the lungs*.

2. *The expiratory murmur.* In a healthy condition of the lungs it is very soft and somewhat shorter than the inspiratory murmur, sometimes scarcely audible at all. Its abnormal conditions are, therefore, *harshness* and *prolongation*. The causes hereof must be sought in a roughened and narrowed condition of the finer bronchial tubes and air-cells, by which greater friction of the egressing air is produced.

This *prolongated* and *harsh* expiratory murmur is rarely heard extending all over the lungs in a uniform manner, but is mostly confined to portions of the lungs, and then is of the highest diagnostical importance.

If it extends over a *large* surface of the lungs, it indicates a more generally swollen and uneven surface of the bronchial mucous membrane; as we find in acute and bronchial catarrh, with or without emphysema. If it, however, is confined to the *apex* of the lungs, between the first and third ribs, and more in front than behind, and more on one side than on the other, it indicates *tuberculosis*.

Old Dr. Jackson, of Philadelphia, was the first who, in the year 1832, drew attention to this prolonged, harsh, and partial expiratory murmur, as a sign of tubercular infiltration, and it has been confirmed by a number of authors since.

This prolonged, expiratory murmur is sometimes broken into two or three jerks, and is observed in tuberculosis; also in old people and children when frightened; also during the chilly stage of fevers. The inspiratory murmur also exhibits such interruptions. It is necessary to listen in such cases to the larynx, whether the interruption is heard there too, otherwise it might easily be mistaken for a friction-sound of the pleura.

3. *Bronchial respiration.* When we auscultate the larynx or trachea, the respiratory sound is louder than in any other part of the chest, if it be in a healthy condition. It may be imitated, as said

before, by forcing the air against the hard palate, so as to produce the consonant *ch*, guttural. This respiratory sound has been termed *bronchial respiration.* If heard in any other part than that above specified, it denotes a change in structure, which subdues the vesicular breathing, and serves as a good conductor of sound from the larger bronchial tubes. Such conditions are: *hepatization and tubercular infiltration,* (the most frequent;) next in frequency, *thickening of the bronchial tubes, with atrophy of the lung tissue; pulmonary œdema and pleuritic effusions; and hydrothorax.*

4. *Rhonchi or rattling noises in the respiratory organs.* When the bronchial tubes are partly constricted, or when tough mucus exists therein, which is set into a vibratory motion by the rush of air during respiration, or, if sticking tightly to the walls, is suddenly torn, then we have all sorts of noises within the thorax. Such noises may sound high, deep, clear, husky, harsh, or hollow; may be short, like a snap, and return at intervals; or be continuous for a longer time, like the purring of a cat.

"These noises," says Dr. Wintrich, "have been called, funny enough, *dry rattle noises,* and have been divided into rhonchi sicci, graves, sonori, sibilantes, and canori. The poetical talent of some authors has had ample opportunity to force them by comparison into the most singular and fanciful classes, by which a cool reflection has mighty little to think," and, I may add, by which the beginner is thrown into utter confusion. They originate within the respiratory tubes, exactly in the same manner as sounds originate in any other kind of tubes. The sound is *high, shrill,* when the tube is narrow or constricted in one or more places; it is *deep,* when the vibrating column of air is long, or when the vibratory undulation is slow; it is *loud, strong,* when the stream of air is of great force; and *vice versa,* it is *weak, faint,* when the stream of air is weak.

These rhonchi often extend over a large portion of the chest; if *deep,* they occasion a vibration of the thoracic walls, perceptible to the touch; if *high,* not. Still we cannot, as has been mentioned already under the head of vocal fremitus, from its extension, draw any conclusion as to the extension of its cause, because this sound may be propagated, like the fremitus, from a single point where it originates to all parts of the chest.

These rattling noises generally have their origin in catarrhal affections, and change constantly according to the location and the different nature of phlegm, which is shifted from one place to another by breathing and coughing. Exceptions to the above are *the hissing*

sounds, which sometimes exist continuously for weeks, and even months. These hissing sounds, or *rhonchi sibilantes*, must have, therefore, a more persistent cause, the nature of which seems to be a constriction in some of the finer bronchi; and we find them in such a persistent manner only in tuberculosis of the apices of the lungs.

The so-called *moist sounds* are thought to originate in the presence of a fluid, which, by the rush of air, is stirred up into large and small bubbles, which burst. We may distinguish the following varieties:

1. *Rhonchus crepitans, vesicular crepitation*, or *crepitant rattle.* It is quite similar to the noise which is produced when a lock of hair is rubbed between the fingers. *It is heard only during inspiration.* Lænnec and all his followers, even Skoda, explain it in this way: that the rush of air during inspiration into the finest bronchial tubes and air-cells, if they contain a fluid, stirs this fluid into bubbles, which burst and thus cause the crepitant rattle. Already *Walshe*, an English author, was not satisfied with this explanation, and according to his opinion it originates through the sudden expansion of the interstitial spaces *around* the air-cells by a full inspiratory action. He thought these interstitial spaces glued together by the exudation of a tough matter in pneumonia, so that a sudden expansion would tear them asunder and cause this crepitation. This opinion of Walshe has already been refuted by Davies in his lectures, who says, that in pneumonia the exudation does not take place *outside* but *inside* of the air-cells, as the tough sputa sufficiently show, and that the same crepitating sound is also found in œdema of the lungs. Dr. Wintrich gives, no doubt, the best explanation of this sound. He says: "This crepitating sound is nothing else but the noise which is caused by the sudden inspiratory expansion of the air-cells and finest bronchial tubes when their walls have become glued together by means of a sticky exudation." It is therefore not heard in a sound lung, because here the air-cells, even during the fullest expiration, never contract to such an extent that their walls touch each other and stick together. Wherever it exists, there exists a morbid swelling and tough secretion within these air-cells and finest bronchial tubes, which bring their walls during expiration in such near contact that, by means of a sticky secretion within, they are glued together and torn asunder by the following inspiratory action.

The intensity of this crepitation depends upon the toughness of the secretion and upon the force with which inspiration tears the adhering walls asunder. It does not cease after coughing and expectoration, because it depends upon a swelling and secretion of the air-cells and

finest bronchial tubes, which no cough can remove. It is heard at *the commencement of pneumonia*, just when exudation takes place and *at its resolution; in capillary bronchitis* and *in œdema and sometimes in emphysema of the lungs.* In œdema the crepitant rattle is much softer and distant, because the transudation is of a much less sticky nature than in pneumonia or bronchitis.

It is heard, lastly, in *sound lungs* under the following condition, as Walshe describes it: "If individuals whose lungs are healthy, or diseased only at the apices, and whose breathing is habitually calm, are made suddenly to respire deeply, a *peculiar, fine, dry crepitation, accompanying inspiration only,* may often be detected at the basis posteriorly. But after two or three, or, at most, five or six, acts of respiration, it totally disappears. This pseudo-rhonchal sound seems to depend on the sudden and forced unfolding of air-cells, which are unaffected by the calm breathing habitual to the individual; and its only importance arises from the possibility of confounding it with crepitant rhonchus."

It is frequently heard in patients who have lain long on their back, especially after typhoid fevers, and may be explained in the same manner. The pulmonary secretion collects mostly in those places which lie deepest and are used least. By these means the air-cells gradually collapse and stick together. A few deep inspirations tear them asunder and at the same time remove the secretion, so that, as there is no morbid swelling in these parts, the crepitant sound ceases after two, three, or, at most, after five or six acts of respiration.

2. *The subcrepitant rattle.* This is a sound which appears to arise from the bursting of very small bubbles in the air-passages. It is heard most distinctly during the act of *inspiration*, weaker during expiration. It denotes a fluid secretion in the finer bronchial tubes.

3. *The mucous rattle.* There is sometimes a great deal of mucus in the respiratory organs; and yet, on auscultation, no rattling sound is perceptible. It seems, then, that certain conditions must exist in order to render the bursting of large and small bubbles in the air-passages audible. These conditions are: that the walls, wherein the sound originates, must be good reflectors of sound, like the larynx, the trachea, cavities, and bronchi, if they are surrounded by walls which do not contain air; and also, that fluid (mucus, pus, blood serum) be contained in them, which, by respiration, is set into bubbling motion. This mucous rattle varies very much in character; is a sound of large or small bubbles, high or deep in pitch; confined to a small spot, or extended over the whole lung. By the extension of the

sound we can never judge of the extent of the fluid which gives rise to it; because this sound is propagated quite a distance from its origin, if there exist good reflecting media. It therefore does not indicate any particular disease, but only certain conditions, like *consolidation* of the lung tissue, either by infiltration or hepatization, compression or atrophy.

4. *The metallic tinkling.* "When, in consequence of a communication with a bronchial tube, or a portion of the lung, the pleural sac contains a considerable portion of air, and also a small quantity of fluid, or when a phthisical cavity of large size is similarly circumstanced, there is every now and then heard a very peculiar sort of tinkling noise upon examining the chest. It resembles very nearly the sound caused by shaking a pin in a decanter. This is the *metallic tinkling.* It is, most commonly, heard only at intervals; that is, it may occur once in three, four, or forty respirations. It rarely, if ever, attends the expiration. It may cease altogether, and reappear after a considerable time. In this respect it seems to be influenced by the position of the patient's body. It is most probably produced by the continued and rapid reverberation of a delicate sound against the firm and vibrating walls of a large cavity. It is in fact an echo in a small space. The original sound from which the echo proceeds appears most commonly to arise from the bursting of a bubble of air, or from a drop of liquid falling upon the surface of fluid in the bottom of the cavity. But it sometimes seems to be likewise produced by the passage of air over a loose portion of *membrane* or *thick secretion* situated in a tube at or near the entrance of the cavity. The physical conditions necessary for its production appear to be a large cavity with resonating walls, and containing a large portion of air, with a small quantity of fluid." Hughes.

In pneumothorax much depends upon the position of the patient. Often, when nothing can be heard while the patient is lying down, the *metallic tinkling* appears at once on assuming the sitting posture. In those cases in which tubercular infiltration extends to the diaphragm in the left lung, it not unfrequently happens that sounds within the lungs are conducted into the cavity of the stomach, where they cause exactly the same metallic tinkling. Any one, who is not aware of this fact, might easily diagnosticate pneumothorax where, upon post-mortem examination, none could be found.

Another practical and interesting sound is

5. *A sort of click*, which is heard occasionally, perhaps not oftener than once in four or six inspirations, resembling the sticky noise pro-

duced by the removal of the tongue from the roof of the mouth. It is generally observed at the apex of the lungs, when there is a deposition of tubercles, and, according to Wintrich, especially when these tubercles commence to dissolve. Cough sometimes breaks it up; but often it is of a very persistent nature.

6. *Friction sound.* This sound originates when both pleural surfaces (pleura pulmonalis and costalis) become roughened and, in the absence of gas, fluids, or adhesions between them, rub upon each other. It generally accompanies both inspiration and expiration; being at one time most distinct during inspiration, at another during expiration. It may be heard during inspiration only, or the reverse. It resembles the creaking of leather; appears at intervals, and in most cases it is recognizable by the finger as well as by the ear, and the patient generally experiences the sensation of something rubbing within his thorax. This sound is most commonly caused by *pleurisy and pericarditis.* It is sometimes heard at the commencement of this disease, when fibrous deposits have settled on the surfaces of the pleura, and the contact of the surfaces is not prevented by serous effusions. It is also heard, and sometimes more distinctly, at a later period of the disease, when absorption of the serous effusion has taken place, and the surfaces, covered by a firm plastic exudation, have once more come in contact. In this case the friction sound continues until either the pleura has formed adhesions to the thoracic walls, or its surfaces have become perfectly smooth. It is also heard in *tuberculosis;* especially in the *left* infra-clavicular region, where it continues to be sometimes for months, even years; because tuberculosis is more or less always attended by partial pleuritic inflammations. Here, however, it must not be confounded with the above-mentioned *interrupted* or *jerk-like expiration.* Both may easily be distinguished, as already stated, by listening to the larynx. If heard there too, it is no *friction sound,* but *interrupted expiration.*

Auscultation of Voice.

The voice, as heard in a normal condition of the respiratory organs. If the stethoscope be placed upon the larynx of a healthy person, and we listen through it whilst the person is talking, his voice sounds nearly as loud as though he were talking immediately into our ear; but the words are not so clearly articulated. The same is true if we place the stethoscope upon the trachea. This normal sound, heard at the larynx and trachea during talking, has been called *laryngophony* and *tracheophony*—laryngeal voice and tracheal voice.

If the stethoscope be placed upon the upper part of the sternum, or upon the cartilages of the second and third ribs, or upon the interscapular regions, we may still hear his voice when he speaks, but much less loud, and the words will be still less clearly articulated than on the larynx and trachea. This normal sound of the voice, as we perceive it over the larger bronchial tubes, is called *bronchophony*—bronchial voice.

If, lastly, the stethoscope be put upon any other part of a healthy person's thorax, the voice of the person is heard simply as a buzzing or humming, or is not heard at all.

Such then are laryngophony, tracheophony, bronchophony and the distant humming or buzzing of the voice, when heard over the respiratory organs in a normal condition. It must not, however, be supposed that there exists any defined line of demarcation between each, so that it could be said, here ends laryngophony, and here begins bronchophony. They all gradually merge into each other; they are not distinct species of sounds, but merely variations of intensity of the same sound. We may convince ourselves of this *gradual lessening* of intensity and clearness of articulation, if we gradually move the stethoscope from above downwards, and listen at the same time, whilst the person is talking.

Further, it must be remarked and borne in mind, that the thoracic voice is very generally more distinct upon the *right* side, and particularly below the right clavicle and over the right scapula, than in the corresponding situations upon the left side; also, that a shrill or acute, high-toned voice, generally sounds clearer and more distinctly modulated than a deep base voice, though not so loud and strong as this; and that the thoracic voice is usually more audible in thin persons than in those whose thoracic walls are loaded with fat; and in persons with contracted chests, than in those in whom the thoracic cavity is largely developed; and, other things being equal, it is also more distinct in females than in males.

The voice as heard in abnormal conditions of the respiratory organs. Pathological changes and conditions multiply these variations in intensity and articulation of the voice still more. We will frequently have to make nice distinctions, and this is only possible, if we compare constantly both sides and different parts with each other, for it rarely ever happens that both lungs should be alike affected. Thus, in listening to the sound portion we obtain a standard by which we are enabled to judge of the corresponding portion. There is a threefold alteration of the thoracic voice from its normal condition possible: it

is either—1. *Decreased in its intensity or suspended altogether;* or, 2, *Its intensity and clearness of articulation is augmented;* or, 3, *It is changed altogether in its character.*

1. *Its decrease* is caused by any and all such solid, fluid or gaseous substances as may form between the lungs and thoracic walls, and which interfere with the transmission of the natural humming or buzzing of the voice on those parts of the thorax mentioned above. This is the case in moderate effusion of lymph or pus into the pleural sac, and in moderate pneumothorax, as far as it separates the lungs from the thoracic walls. It is the case in widely-extended emphysema, if the bronchial tubes are not widened and thus made good conductors of sound. It is the case, where large cavities, as it were, swallow up the sound. It is quite important that all this be borne in mind, lest we might make mistakes.

The natural thoracic voice is *entirely subdued,* when massive exudations and transudations in the pleural sac cause a separation of the thoracic organs from the thoracic walls. The same is produced by pneumothorax, if it do not cause metallic tinkling. The most *total suppression,* however, of the thoracic voice is caused by the closure of the bronchial tubes, either by foreign bodies, tough mucus, large quantities of pus, phlegm, or serum, &c. The higher up towards the larger bronchi such stoppage exists, the larger is the circumference in which the natural thoracic voice is wanting.

2. *Its increase in intensity as well as in clearness of articulation.* At first I have to remark, that in no case of morbid affection, and on no part of the thoracic cavity, does the voice sound so loud as at its origin, the mouth. But it may sound as loud, or nearly as loud, as we hear it in a normal condition at the larynx. French authors have called this highest increase of the thoracic voice *pectoriloquy*, which means a speaking out of the chest. If it exist in a degree, as on those places, where the larger bronchial tubes lie, near the thoracic walls, it is called *bronchophony.* Neither pectoriloquy nor bronchophony are always of the same strength or loudness, and therefore the authors speak of a perfect and an imperfect pectoriloquy, and of a loud and a weak bronchophony.

The question arises, what causes this increase of the thoracic voice to bronchophony and pectoriloquy in places where there should naturally exist only a humming or buzzing of the voice?

The answer is: *This increase of the thoracic voice depends entirely upon a greater or lesser degree of aptness of the bronchial tubes to reflect and conduct sounds.* This aptness of the bronchial tubes grows in the

same degree as their walls become tenser and more solidified, approaching in consistency the walls of the trachea and larynx; and further, when these tubes are surrounded by fluids or semi-solid exudations, (as in pneumonia;) or even by solid masses; or when the substance of the lungs around them has become compressed, and thus deprived of air. All these requirements for an increase of the thoracic voice we find more or less realized in the following pathological conditions: In *tubercular infiltration,* if it surround several bronchial tubes up to their last extremities, (this is of the most frequent occurrence;) in *pneumonic infiltration,* where the semi-fluid or coagulable exudation causes hepatization of the substance of the lungs; in *strongly-developed œdema,* especially of interstitial lung tissue, and this only in rare cases; in *dilatation of the bronchial tubes,* if surrounded by indurated and shrinking, airless lung tissue; *in tumors of all kinds,* if they compress the lung tissue, or by their own nature and situation around the bronchial tubes become good conductors of sound; in *all kinds of fluid exudations* into the pleural sac, pleuritic exudation, hydrothorax, hæmathorax, emphysema, &c., when they compress the lung to such a degree that the peripheric portions of it become deprived of air—in such cases, however, the lung must not be pushed too far from the parietes of the thorax, as, for example, during the period of dilatation in pleuritis, in which, in the majority of cases, no sound is heard at the corresponding wall of the thorax; in *cavities,* which stand in unbroken connection with the larynx, trachea, and larger bronchial tubes, which have smooth walls that are good reflectors, which are neither too large nor too small, and which are situated so near to the periphery that but little pervious lung tissue intervene between them and the thoracic walls—the nearer they are to the periphery and the tenser and harder their walls, the greater is the intensity of the thoracic voice heard over them.

This increase of the thoracic voice in consequence of these pathological conditions over parts which, in a normal state, afford only a humming or buzzing of the voice, has been called, as already stated, according to its degree, weak or loud bronchophony, and imperfect or perfect pectoriloquy. Bronchophony has always a kind of *nasal twang,* is never so clearly modulated as sounds or words which come immediately from the mouth.

3. *The thoracic voice is changed in its character.* Such a peculiar deviation from bronchophony is the so-called *ægophony,* a tremulous sound, which resembles the bleating of a goat, and which is nothing but a modified bronchophony, with the nasal twang of quick, succes-

sive, tremulous interruptions. (Wintrich.) It is heard sometimes without any pathological change, in old people, if their voice has become of a trembling character. Otherwise it is found under conditions similar to those which produce bronchophony, and does not designate any particular condition or disease.

Another deviation from bronchophony is *the cavernous voice*, which is well modulated, without nasal twang or goat-bleating. It originates in moderately large cavities, which are situated near the thoracic wall and adhere to it; which have thin, smooth walls, capable of good reflection; which are, by the larger bronchial tubes, in uninterrupted connection with the larynx and trachea, and which do not contain too much fluid.

If these cavities are large, another deviation from mere bronchophony is occasioned, which is spoken of in books under the name of *emphoric echo and metallic tinkling*. These phenomena may be imitated by a person speaking and directing his voice into a jug. When he does so, a peculiar humming is heard in addition to the voice. Besides this humming, there is also occasionally heard a metallic after-tone, both of which represent what Lænnec describes under emphoric echo and metallic tinkling. It is produced in tolerably large cavities, and also sometimes in pneumothorax.

Auscultation of Cough.

As cough is nothing else than a loud and forced expiration, it is clear that all which has been said about respiration and voice is likewise applicable to the cough. It is heard weaker or louder under the same conditions which decrease or increase the sound of respiration and of voice. In some cases it may make some of the auscultatory signs clearer and more distinct, and thus far it may be a help to a more accurate diagnosis.

Special Diseases of the Respiratory Organs.

Having thus far explained, step by step, the phenomena which respiratory action, in normal as well as abnormal conditions, offers to the senses of *sight*, (inspection,) *touch*, (palpation,) and *hearing*, (percussion and auscultation,) we now come to consider *certain forms of abnormal conditions* of the respiratory organs which occur again and again; and although varying constantly as individual cases, present, nevertheless, some common, persistent features by which they may be arranged, considered, and recognized as definite and marked forms of pathological alterations and conditions in these organs. What we

have learned concerning the respiratory action in normal and abnormal conditions, we shall now have occasion to apply to certain diseases, and in this way demonstrate its practical use.

A. Affections of the Bronchial Tubes.

Bronchitis, *Catarrh of the Bronchial Tubes.*

This, like all catarrhal inflammations, is characterized by a hyperæmic state of the mucous membrane in these tubes, causing abnormal secretions; and if long continued, causing also a gradual change in texture. The membrane appears injected, ecchymosed, infiltrated, opaque, swollen, and covered with secretion. In this way the finest tubes become closed entirely, so that the ingress and egress of air into the air-cells cease altogether, and a poisoning of the blood by uneliminated carbon takes place as a necessary consequence. This state of things generally happens with infants, who are not strong enough to clear out the secreted phlegm. In such cases, during post-mortem examination, the lungs swell out of the thorax, not having room enough inside without they are compressed by the parietes of the thorax, because their alveoli remain filled with the inhaled air. In chronic cases the mucous membrane grows hypertrophic, the muscular fibres lose their elasticity, and the tubes enlarge in width; either evenly diffused, or only in short tracts, sac-like, which is called *bronchiectasia.*

The inflammation may be confined to the larger or to the smaller bronchi. In the first place it is accompanied more or less by a troublesome tickling under the sternum, or a sore feeling or burning; whilst in the latter no such sensations exist, as the finer bronchi are less liberally supplied with sensible nerves than the larynx and trachea. But the cough is usually much more violent and tighter than in the first place; and, if spread over a large surface, it is always attended with more or less dyspnœa, which, in an affection of the larger bronchi alone, is never found, and for obvious reasons: the swelling and phlegm, if ever so great, could not easily shut these large tubes, whilst in the smallest a little swelling and a small quantity of phlegm may easily prevent the undisturbed ingress and egress of air.

Bronchitis, whether confined to the larger or smaller tubes, is most always attended with *fever.* It generally sets in with *chilliness,* alternating with a feeling of *burning heat,* without a corresponding rising of the mercury when the thermometer is applied. Thus we may already in the commencement of a fever be able to distinguish a

catarrhal from an inflammatory fever; the latter, generally commencing with only one chill, is followed by a fever-heat that indicates a much higher degree on the thermometer.

Such catarrhal fevers are sometimes epidemic, when they are called *influenza* or *grippe;* involving the whole system, and especially the mucous membranes even into the bowels.

In old people, or otherwise exhausted persons, such catarrhal fevers sometimes take a bad turn, and assume a *typhoid character.* The patient becomes delirious and comatose; his tongue dry; pulse small and frequent; and his person covered with exhausting perspiration. To the comatose state is added at last, a rattling in the trachea from the bursting of big bubbles; which is caused by the inability to throw off the phlegm, in consequence of a paralysis of the muscular fibres of the bronchi. This is the so-called death-rattle; after the setting in of which the scene soon closes. This form of bronchitis is termed by old writers *pneumonia notha.*

Another form is the so-called *catarrh on the chest of infants*, especially during dentition. It involves the smallest branches of the bronchi, whence it is also called *bronchitis capillaris.* Its character is the same with any other form of catarrh; but as the swelling attacks the finest tubes, it soon makes them impervious to air, and consequently prevents the expulsion of carbon, and the inhalation of oxygen. Such children are in great distress, breathing heavily, with hissing and rattling noises in the chest. The coughing spells are painful and violent, driving the blood to the face, and when still further progressing, the epigastric region and lower ribs are drawn in during inhalation, as in croup; a sign that the air-cells are no longer filled by the inspiratory act; so also do we find the supra and infra-clavicular region bulging out, protruding, as the air contained therein is not removed by expiration, and there is consequently a noticeable stillness of the upper part of the chest during expiration.

When such an attack befalls new-born children from their having been exposed to cold by washing, bathing, &c., it sooner develops itself into a higher stage, as the child is too young and too weak to clear away the accumulating secretion by its own efforts. The child turns bluish and grayish; the nose becomes pointed; the eyes dull; and the respiration quite superficial. It is nothing more nor less than a clogging-up of the finest bronchial tubes, and, in consequence of that, an overcharge of the whole system with carbon A superficial observer might confound it with cyanosis from some organic lesion of the heart.

Physical Signs.

Percussion reveals nothing in these affections; its sound is everywhere the same as in a healthy condition.

Auscultatory signs depend upon the condition of the bronchial tubes. *As soon as their mucous lining becomes inflamed and swells,* the vesicular murmur becomes loud, harsh, and coarse; the expiratory murmur, usually scarcely audible, also partakes of that nature, and may even be louder than the inspiratory murmur. When, however, the inflammation invests the larger bronchial tubes, the vesicular murmur is frequently oversounded by the loud bronchial breathing which originates there; but, when the breathing is slow and weak, there may be, at the commencement of the disease, no sound at all perceptible.

As soon as the mucous membrane becomes covered with secretion, we hear all sorts of mucous rattling, fine bubbling, large bubbling, hissing, and whistling sounds, according to the nature and location of the secretion. When the secretion is located in the larynx, trachea, or larger bronchi, the rattling noise caused in those locations may be heard all over the chest; hence we cannot, from the extent of the noise, judge of the extent of the secretion. On the contrary, the finer bronchi may be filled with mucus, and no rattling noise be perceptible when the breathing is weak and feeble. When, during vigorous respiration, the vesicular murmur is absent, it denotes the presence of a large quantity of mucus, or the closure of the finest bronchial tubes by swelling, which prevents the air from entering into the air-cells.

In regard to *differential diagnosis,* bronchial catarrh differs from other acute lung diseases by the absence of acute pain—it produces only a sore, raw, and burning sensation; by the absence of all abnormal percussion signs; and by its commencing with frequently-repeated chills.

Therapeutic Hints.

Catarrh on the chest of infants, Acon., Bell., Bryon., Calc. c., Ipecac., Lach., Opium, Phos., Sulph., Tart. em.

Catarrh of old people, or exhausted persons, Baryta c., Bryon., Carbo veg., Hydrastis, Lachesis, Rhus t., Tart. em., Veratr.

Croupous inflammation, Hepar, Lachesis, Spongia. Compare Croup.

Chronic cases, Calc. c., Carbo veg., Caust., Kali c., Kali bichr., Lach., Phos., Sulph., and others.

Compare Catarrh of nose, larynx, and trachea.

Aconite, in the commencement; high fever; dry skin; restlessness; after exposure to cold west winds.

Bellad., hot skin, with inclination to perspire; crying when coughing; sleepy, but can't sleep; starting in sleep.

Bryonia, crying when being moved; cough tight; worse through the day; from motion; when entering a warm room; pain in the pit of the stomach, and in the muscles under the short ribs, when coughing.

Calc. c., teething children; loose cough; rattling of mucus; bowels moved more frequent towards evening.

Carbo veg., evening-hoarseness; burning under the sternum; in bad cases, coldness of skin; pointed nose; rattling of large bubbles; dyspnœa; cold knees in bed.

Caust., morning hoarseness; when coughing, pain over the left hip, involuntary discharge of urine.

Eupatorium perfol., rough, scraping cough; violent cough, with soreness in the chest; the patient supports the chest with the hands; cough before and after measles.

Hepar, in croupous inflammation; cough tight or loose; worse in the morning; after exposure to cold west winds.

Hydrastis is recommended for old people with debility; loss of appetite; cachectic conditions; and when the discharge is thick, yellowish, very tenacious, stringy, and profuse.

Ipec., rattling of large bubbles; convulsive cough, with throwing up of phlegm; dyspnœa, nausea, vomiting, diarrhœa; face pale, even bluish.

Kali carb., chronic cases, cough worse about three o'clock in the morning.

Kali bichr., expectoration of tough phlegm, which can be drawn into long strings.

Lachesis, worse in the afternoon; worse after sleep; asthmatic breathing; sensitiveness of throat to any touch; tickling in the pit of the throat; fetid stools, even if formed.

Merc., catarrh of the whole mucous membrane from the nose down; chilliness and heat alternating; sweat without relief; cannot bear neither warm nor cold air; cough worse when lying on the *right* side; tongue coated thick yellowish; great thirst for ice-water, although it aggravates the cough.

Nux v., always after previous use of cough-mixtures; cough worse in the morning; nose stopped up; headache; fever, with chilliness from slightest motion.

Opium, convulsive, dry, tickling cough in paroxysms, worse at night; frequent gaping, drowsiness, and inability to go to sleep.

Phosph., tight cough, worse before midnight; tightness across the chest; pain in the head when coughing.

Puls., chilliness; thirstlessness; loose cough, worse in the evening when retiring; after measles; greenish expectoration.

Rhus t., cough excited by a tickling under the middle of the sternum, worse from laughing or loud talking; pain in the bones, which are worse when lying or sitting still; restlessness.

Rumex, dry cough in long paroxysms, brought on by any irregularity in breathing, taking a deeper breath than usual, talking, or from external pressure upon the throat-pit; worse in the evening after retiring; the patient covers the head all over, because the slightest draught of cold air at once brings on a distressing tickling in the throat-pit and behind the sternum, more towards the left side.

Spongia, in croupous inflammation; dry, hoarse, hollow, barking cough, worse in the evening; sawing respiration.

Sulphur, cough worse in the evening when going to bed; mostly loose; constant rattling in the chest; pain in the left side; chronic cases, and when other remedies may have failed.

Tart. em., rattling in the chest; drowsiness; delirium; coma, with pale, puffed face; signs of poisoning of the blood by carbonic acid gas.

Veratrum, constant tickling deep in the chest; rattling of mucus, but impossibility of freeing the chest of it; sinking of strength; frequent, irregular pulse; old people.

Tussis Convulsiva, Pertussis, *Hooping-Cough.*

This affection is, in its nature, a species of bronchitis, but of an epidemic nature, and not a mere nervous complaint. In the beginning it cannot be distinguished from an ordinary bronchial catarrh; later, however, the fits of coughing assume that characteristic whoop, which consists in a long, crowing inspiration on account of a spasmodic closure of the glottis, and which is followed by several short expirations in quick succession, ending most frequently with vomiting of large masses of tough, gelatinous phlegm. Such paroxysms come as often as the collection of phlegm is sufficiently abundant to excite them. The child feels their coming and dreads them; therefore, it almost always strives to get hold of something whereby to support itself. During the paroxysm regular respiration is very much interfered with, and it explains those cyanotic symptoms, which we so frequently observe in the face and on the neck, (bluishness and

swelling of veins,) and also the general convulsions, in consequence of congestion to the brain. Hard paroxysms cause, by their violent convulsive straining, not unfrequently bleeding from mouth, nose, and even ears. After such attacks the child is almost always more or less exhausted.

Hooping-cough has been divided into three stages: the *catarrhal*, *convulsive*, and the *critical*. The first is like any other catarrh; the second is *sui generis*, by its peculiar paroxysms; and the third, like the first, is similar to an ordinary catarrhal affection, and gradually wears off. The popular belief in regard to whooping-cough is, "that it is six weeks coming, six weeks standing, and six weeks going;" but, like all other popular observations, this ought to be taken with some discrimination. For, although obstinate cases last a long while, under careful Homœopathic treatment they never last that length of time. Its physical signs are precisely those of bronchitis. Hooping-cough may, when the inflammatory process spreads into the finest bronchial tubes and further, combine with bronchitis capillaris; may cause pneumonia and emphysema; or, by its disturbance of circulation, bring about hyperæmia and even œdema of the brain and its membranes. In these complications lies its danger. Ordinary, simple cases pass over without any difficulty.

Hooping-cough prevails mostly epidemically, mostly attacks children, and, as a rule, only once in their life, and is said to be broken off at once by vaccination.

Therapeutic Hints.

Bœnninghausen has written a whole book on the treatment of hooping-cough, giving a repertory of all the cough symptoms, their aggravations, ameliorations, and collateral symptoms. In obstinate cases we ought to consult this work. I shall confine myself to the most important remedies.

Nux. v., always after previous quackery with cough-mixtures, drops, &c.; cough worse early in the morning; vomiting; gagging; constipation; choking spells, with bluish face; pain in the umbilical regions, as if torn to pieces, during the spell.

Bellad., congestion to the brain; red face; hot head; fever; drowsiness; restless sleep, with frequent jerking and starting; or inability to go to sleep; sneezing after coughing.

Cuprum, convulsive, long-continuing paroxysms of coughing, worse from eating solid food, better from drinking cold water; during the paroxysm, loss of breath and convulsive throwing up of tough,

gelatinous mucus, and afterwards constant rattling on the chest; bluish face and lips; convulsions of the flexor muscles. Bähr considers it specific in hooping-cough.

Cina, convulsion of the extensor muscles; the child becomes suddenly stiff; there is a clucking noise, as though water were poured out of a bottle, from the throat down to the abdomen; frequent sneezing after the paroxysm; worm symptoms.

Corallium rubr., spasms of cough, so violent that children lose their breath and grow purple and black in the face.

Veratr., vomiting of tough, thin mucus, with cold perspiration on the forehead, and involuntary discharge of urine; face pale and sunken, restlessness and anxiety; spells brought on from entering a warm room or drinking cold water.

Drosera, worse after midnight; feeling of constriction in chest and hypochondria, so that the patient tries to support these parts by the hands; worse from tobacco-smoke and drinking; vomiting at first of ingesta and then of mucus.

Ledum, dizziness; staggering after the paroxysm; moaning and groaning during sleep; spasmodic contractions of the diaphragm after the spell, so that inhalation becomes double, sobbing-like, as we observe after hard crying-spells.

Asthma Bronchiale Nervosum seu Convulsivum, *Asthma.*

This affection bears a strong analogy to spasmus glottidis. Like the latter, this affection is said to be caused by an irritation of the nervus vagus. It may be either central, peripherical or a mere reflex from other nerves. Asthma, if purely nervous, exhibits no alteration in the air-passages on post-mortem examination. The irritation of the vagus causes a mere spasmodic contraction of the muscular fibres of the bronchial tubes, and thus the difficulty of breathing. But how this irritation is brought about we do not know. Some consider it a concomitant of heart diseases and emphysema; some of lesions in the central organs. In some cases it seems associated with chronic uterine complaints; then again it is found in suppression of urine, as the result of poisoning of the blood by decomposed urine, and yet it exists also in persons who exhibit, neither during life nor after death, the slightest signs of any of these complaints.

Its exciting causes are likewise various. In some persons it is brought on by living in certain localities; in others by inhaling dust, (millers, stonecutters, &c.;) in others by smelling certain drugs, (ipe-

cacuanha;) and in still others it has been traced to mental excitements, sexual excesses, incarcerated flatulence, &c. It generally comes in paroxysms; the intervals between which may amount to weeks, months, and even years. It not unfrequently commences during sleep; then the patient gets restless; the gradual increasing difficulty of breathing causes terrible dreams and awakens him. On getting awake the patient has a desire to draw a long breath, but feels that the inhaled air does not reach and satisfactorily fill his lungs. We hear, and so does the patient, all sorts of hissing, whistling, and rattling noises during inspiration and expiration. The dyspnœa increases; the respiratory muscles labor; the alæ nasi move up and down; the sterno-cleido-mastoid muscles are put upon the stretch; the head is drawn backwards; the arms are pressed firmly upon the chair to widen the chest; but all in vain. The vesicular murmur ceases, and in place of it we observe here and there a hissing noise, coming and going suddenly; the inspiratory noise in the larynx and trachea, however, continues even stronger than normal. There is an anxious expression of countenance; the eyes are wide open; cold perspiration covers the forehead. The color of the face is pale; the impulse of the heart is violent, uneven, irregular; the pulse at the wrist is weak and small; the hands and cheeks are cold. After some time, varying from a quarter of an hour to several hours, with short intervals, the paroxysm ceases, either suddenly, when the air rushes into the bronchial tubes, which are suddenly relieved from spasm, causing puerile respiration, or the relief is only gradual, attended with belching, yawning, or increased secretion within the bronchial tubes, which excites cough and rattling of mucus for some time afterwards. Romberg.

To this may be added that instead of bending the head backwards we find patients just as frequently bending their head and whole person forwards, leaning themselves upon a table or chair.

The *asthma humidum* of old age is perhaps the same thing; for although it is usually attended with a great rattling in the chest, as though the bronchial tubes were full of mucus, yet on post-mortem examination nothing of the kind is found.

Its prognosis is favorable. Asthma alone does not cause a fatal issue, but when complicated it may. It has its own remedy within itself. The accumulation of carbon relaxes all the muscles of the body, and, of course, the contracted bronchial muscles. As soon, however, as they relax, respiration is at once free, and the paroxysm ceases. Niemeyer.

Therapeutic Hints.

Arsenic, worse in the night; great restlessness; pale, cold face, covered with cold perspiration; prostration.

Carbo veg., full of wind, with impossibility of getting rid of it, in old people; weakness, with trembling.

Ferrum, attacks after midnight, and drives out of bed; better from moving about.

Ipecac., constant cough, no phlegm yielding, although the chest seems full of it; cough causes gagging, vomiting, followed by relief; stiffness of the whole body; cold extremities, and cold perspiration.

Lachesis, worse after sleep; after eating; from moving the arms; and touching the throat; cannot lie, must sit up bent forwards.

Lobelia inflata, worse from exertion; disordered stomach; and especially a feeling of weakness in the pit of the stomach.

Nux v., in persons who drink much coffee and liquor, and who are very irritable; they feel full in the pit of the stomach; belch a good deal, and feel better after it; costive bowels.

Opium, short inspiration; long, slow respiration, with a marked drawing in of the epigastrium; fine rattling in the chest; constant cough; soporous condition; snoring respiration; face of a bluish color; extreme anguish from dread of suffocation, and appearance as if dying; slight relief by cold air, and by bending forwards; aggravation from eating; from wine; and from smoking.

Pulsatilla, worse in the evening; constant chilliness; dizziness when rising from a seat; nausea and vomiting; palpitation of the heart; deranged menstruation.

Silphium laciniatum is highly recommended by Western physicians in all kinds of asthma.

Pulmo vulpis has been recommended by Grauvogl in asthma humidum of old people when no other remedy was of any avail.

Besides these, compare the following indications of Dr. Temple S. Hayne, of Chicago, stated in the Western Homœopathic Observer of March, 1867:

Aconite will be found of benefit in dark-haired, plethoric persons, who lead a sedentary life; in those cases where the attack follows the suppression of an acute rash; and in those cases which present the following symptoms: a small, intermittent, or irregular pulse; coated tongue; eyes staring; respiration oppressed; palpitation of the heart; the muscles of the chest are rigid; the face is red; the forehead bathed in perspiration; occasionally vomiting; and the urine scanty and dark. The patient is anxious, irritable, and peevish; can talk

but little at a time; is averse to motion, and complains of a band around his chest. After the paroxysm, the expectoration is blood-streaked or yellow. Aggravation in the spring; dry weather; after eating; from talking; during inspiration at night, and during sleep; that is, he is generally awakened from sleep by the paroxysm. A much more useful remedy is **Arsenicum album;** especially in anæmic persons. Sweat on lower part of the body; in Aconite it is general over the whole body. The face is pale; the pulse quick, small, and weak; and the patient complains of dust in the lungs and throat; the expectoration is frothy, with a saltish taste. Cold water or ice applied to the throat ameliorates.

Arnica differs from Aconite in the following symptoms: inclination to move; sleeplessness before midnight, (Aconite, sleeplessness after midnight,) and the patient appears to be dying. Arnica is rarely used.

Argentum has been used with success in several cases where the attack comes on in the afternoon; sweat on the upper part of the body; frequent and copious urination; and almost constant expectoration.

Aurum is indicated in light-haired persons; especially the subjects of an active mercurial treatment; when the attack comes on in the morning, and the face becomes cyanotic; aggravation in wet weather and warm air.

Baryta will be found useful in old people; especially fat people, with light hair; aggravation same as Aurum; frequent and copious urination.

Belladonna is indicated when the paroxysm comes on in the afternoon or evening. The patient complains of a sensation of dust in the lungs, (similar to Arsenicum, but Belladonna is more applicable to plethoric and Arsenicum to anæmic persons;) better when bending the head back, and when holding the breath; there is usually sweat on the upper part of the chest. A spoonful of wine frequently ameliorates when Aconite is indicated; but when it aggravates, Belladonna is the remedy, if the other symptoms correspond.

Asthma coming on in the evening, or in foggy weather, in light-haired persons, with a tendency to constipation, indicates **Bryonia.** The respiration is quick and deep, without motion of the ribs; better in the cold air, and from drinking cold water.

Calcarea carbonica has been used in asthmatics of a scrofulous diathesis, very often with success. The indication is somewhat similar to that of Bryonia. The attack comes on *early in the morning*, the

muscles *are not rigid*, and the sensation of dust in the throat and lungs is generally present. The other symptoms correspond with those of Bryonia. The asthma of old people, especially inveterate cases, requires **Carbo veg.** when the attack comes on early in the morning. The prominent symptoms are, appearance as if dying, increase of saliva, and better in cold air. The symptom, "appearance as if dying," indicates one of these five remedies, viz.: Arnica, China, Coffea, Opium and Carbo veg. The totality of symptoms must decide which is the appropriate remedy.

When an accumulation of flatus seems to produce the attack, **Chamomilla** is the remedy. There is an inclination to be constantly moving; the upper part of the body is covered with sweat; the face of a reddish color, and the urine pale. Better from bending the head back, in cold air, and drinking cold water. Worse in dry weather, and from warm diet.

China, as stated above, is indicated when the patient appears to be dying. Its chief use is in debilitated persons, inclined to flatulency and diarrhœa. The more prominent symptoms are, sweat of the upper part of the chest; inclination for motion, and increase of saliva. The paroxysms come on in the *fall*, wet weather, and after midnight.

Coffea is another good remedy for the morning paroxysms. The patient wants to be continually moving; urinates frequently and a large quantity at a time, and fears death, during the paroxysm.

In rare cases **Conium** is undoubtedly a valuable remedy; acts with better effect on light-haired persons. Principal symptoms: face of bluish-red color; urine pale, and sweat on the lower part of the body. Paroxysm apt to come on in wet weather.

Occasionally we meet with a case requiring **Cuprum metallicum.** The pulse is slow and weak; the face of a bluish color; urine dark and scanty; and inclination to be constantly moving about. More suitable for light-haired persons.

Digitalis is indicated in those cases where the respiration is slow; pulse slow, or intermitting the third, fifth, or seventh beat; face of a bluish red color; sweat on the upper part of the body; and tendency to diarrhœa. The paroxysms come on early in the morning, especially in cold weather.

Hepar sulph. must not be forgotten in those cases which awaken the patient from a sound sleep. During the paroxysm the face becomes blue, the saliva is increased, and the patient complains of dust in the lungs; smoking (tobacco) and throwing the head back ameliorate; the expectoration after the attack is frothy.

Ignatia differs from Aconite in the following symptoms: it is suitable in anæmic persons of an hysterical diathesis, (if I may so call it,) when the attack comes on in the day or evening before midnight. During the attack the face is livid; the saliva is increased; the urine pale and copious, often passed involuntarily; the abdomen bloated; and a partial sweat covers the chest. Cold air seems to relieve.

Kali carbonicum is frequently of great service where there is an aversion to being alone, or to the open air; more or less perspiration on the upper part of the body, increased by motion, and a dry, harsh respiration, are the prominent symptoms. During the paroxysm, in addition, the patient is anxious and peevish, the face pale, the saliva increased, and the urine scanty.

Hartmann says: "Asthmatic paroxysms originating from the inhalation of the vapor of arsenic are removed by no remedy with more certainty than by **Mercurius** 3d in repeated doses." Mercurius is also of great benefit in those cases where smoking (tobacco) and cold air lessen the violence of the attack.

Moschus is laid down by a few authors as a remedy for acute asthma in hysterical females, and in children from exposure to cold. It is indicated in anæmic persons when the paroxysm comes on in the afternoon.

Spongia meets the following symptoms: attack comes on in the afternoon; the face red; eyes staring; respiration slow; urine pale; expectoration blood-streaked or yellow.

Sulphur meets those cases occurring in persons of a scrofulous diathesis, who are subject to constipation, diarrhœa, or alternating constipation and diarrhœa. The attack comes on during sleep or in the evening, with a feeling of tightness across the chest, and a sensation of dust in the air-passages. The attack is often brought on by exposure to a smoky atmosphere.

Thuja has been used in asthma when the attack comes on in the afternoon or after midnight. The face during the paroxysm is red; the urine too copious, and often is passed involuntarily. Relief is afforded by throwing the head back, and by cold drinks.

Veratrum album is indicated in inveterate cases when the attack occurs in damp, cold weather; early in the morning. Prominent symptoms are: coldness of the nose, ears, and lower extremities; cold sweat of the upper part of the body; vomiting; inclination for motion; and amelioration from throwing the head back.

B. Affections of the Pulmonary Parenchyma.

Pneumonia.

In the light of pathological anatomy, this affection consists in a hyperæmia of the pulmonary capillaries, with croupous, catarrhal or serous exudation. According to these different products, it has been divided into *croupous*, *catarrhal*, and *serous pneumonia.*

Catarrhal pneumonia is nothing more nor less than what we have considered already as *bronchitis*, which extends into the finest or capillary bronchi, and is therefore called *catarrhal capillary bronchitis.* It is mostly found in children in consequence of hooping-cough, influenza or croup; or rather it is but an aggravation and extension of these affections.

Serous pneumonia, or *acute œdema of the lungs*—of which I shall speak hereafter—is anatomically characterized by a serous exudation, and is generally a secondary affection in consequence of croupous pneumonia, bronchitis, formation of tubercles, heart diseases, typhus, measles, and scarlet fever. The most common of the three affections, and which is usually meant by the term pneumonia, is the

Croupous pneumonia. Its exudation is of a croupous or fibrous nature, and capable of being vitalized. It attacks in preference the inferior lobes of the lungs, especially the right one; very rarely both lungs at the same time. It also very rarely pervades one whole lung, being much oftener confined to limited portions, which may even be too small to be detected by percussion. It is also a rare occurrence that the inflammation attacks only a central portion of a lobe, (central pneumonia,) but it generally extends to the surface of the lobe which joins the pleura. In aged persons and cachectic individuals it has been found that the posterior parts of the lungs are most frequently attacked. When normally progressing, pneumonia offers three distinct stages for consideration: 1. *The inflammatory stage*, or *hyperæmia of the capillaries in the lung tissue with exudation of coagulable lymph;* 2, *Hepatization*, or *infiltration of the lung tissue with coagulable lymph;* and 3, *Its resolution*, or *purulent infiltration—the development of the coagulated lymph into pus.*

The characteristic signs of these different stages are as follows:

First stage. As a general thing the disease sets in with *a violent chill*, which is followed by *dry fever heat*—39–40 deg. of Celsius—pulse full, hard, 120; later comes profuse *perspiration*, which does not last long. The face is *purplish-red*, and frequently only on that side

which corresponds to the diseased side of the lungs. The lips become covered with *hidroa*, (fever blisters,) and also very often only on the affected side; or, at least, more marked on that side. Respiration is short and labored, but in some cases not materially affected. *Cough* is, in almost all cases, present; although in some cases less marked than in others; the patient generally tries to suppress it, on account of the pain which it gives. At first it is dry, but after a time it is attended by a tough, jelly-like, viscid sputum, difficult to expectorate, and which has generally to be wiped off the lips; it soon becomes the characteristic color of *rust*.

When the patient complains of *stitch-pain* in the chest, it may be more or less a sign that the pleura is likewise involved; when he complains of *dull, heavy pains*, they probably originate in the bronchial tubes.

In consequence of the disturbed action of the circulation through the lungs, the blood being either not sufficiently oxygenized, or being prevented from or retarded in its return from the brain, causes also different *brain symptoms*, as *delirium, stupor*, &c., so that such a case may take the appearance of typhoid fever, from which it, however, is easily distinguished by the *hidroa* on the lips, which are scarcely ever found in typhoid fever.

The urine is scanty and concentrated, and gives, with nitrate of silver, a heavy precipitate.

The *physical signs* at this stage are the following:

Inspection discovers *decreased mobility* of the diseased side of the thorax. In cases where both the lower lobes are engorged, the patient moves only the upper part of the thorax in breathing, whilst the abdomen remains quiet on account of the impossibility to retract the diaphragm.

Palpation shows an increased vocal fremitus, unless the bronchial tubes should be stopped up by mucus. The impulse of the heart is also increased, but felt in its normal position.

Percussion yields generally a short, tympanitic sound over the parts involved, as long as they still contain air.

Auscultation reveals that fine *crepitant sound* which, according to Wintrich, seems to arise in consequence of the sticking together of the walls of the air-cells, and their separation by inspiration.

Second stage, hepatization. The above-mentioned symptoms—fever heat, (40 deg. C.,) dyspnœa, cough, pain, and brain symptoms—continue without abatement; the urine no longer throws down a precipitate with nitrate of silver, but it contains *albumen*. The thorax ap-

pears, on inspection, still less movable during respiration; the vocal fremitus is strong, provided there does not intervene a pleuritic effusion between the hepatized lung and the thoracic wall.

Percussion gives forth a dull sound, and the resistance of the thoracic walls to the percussing finger is increased, provided the hepatized portion of the lung have the thickness of about one inch, and a superficial extent of several inches. A central location of the hepatization alters the percussion sound very little, if any, on account of the intervening portion of lung containing air.

Auscultation yields neither the natural vesicular breathing, nor the crepitant sound of the first stage, but *bronchial breathing*, *bronchophony*, and even *pectoriloquy*, provided the bronchial tubes, which are contained in the hepatized portion of the lung, be not stopped by mucus, blood-coagula, &c. There are also heard all sorts of rattling noises if mucus exists in the bronchial tubes.

Third stage, resolution. This sets in sometimes with a sudden relaxation of all the violent symptoms—the fever heat decreases some ten degrees in a few hours; the congested, even purplish face becomes pale, the skin moist, the dyspnœa ceases, the sputa become copious, frothy, yellowish, easily expectorated; the urine becomes clear, copious, and again throws down a thick precipitate on the addition of nitrate of silver.

On *inspection*, we observe that the thoracic walls regain their natural mobility; the *percussion sound* becomes again *tympanitic*, and by means of *auscultation* we observe the bronchial breathing and bronchophony becoming weaker; the crepitation sound reappears, until, at length, the natural vesicular respiration is re-established.

This is the regular undisturbed progress of pneumonia, lasting, on an average, from fourteen to twenty-five days, of which two, three, or five days are consumed by its first development, five to eight days by exudation progressing to perfect hepatization, and seven to fourteen days by the resorption of the exudation and convalescence.

But, to the first invasion of inflammation, new invasions often follow, so that it is not uncommon to find in one lung all three stages united.

Or, the adjoining portion of the healthy lung becomes œdematous; that is, infiltrated by a serous exudation, in which case the dyspnœa increases to suffocation. There is, at the same time, a frothy expectoration and fine rattling noises in the lung not affected with croupous pneumonia. The impossibility of breathing, on account of the

serous infiltration, causes an accumulation of carbon in the blood, and, in consequence, death by suffocation.

Or, the *brain* becomes *hyperæmic* in consequence of the disturbed action of circulation through the lungs in the second stage; the blood being either not sufficiently oxygenized, or being prevented from, or retarded in its return from the brain, causing stagnation and death with all the signs of apoplexy.

Or, *abscesses* form in the third stage of the disease, which, if small, or deeply seated, offer no physical signs, and may discharge and heal. When large, and forming large cavities, we may hear pectoriloquy, and, in some cases, metallic tinkling.

Or, the hepatization may change into *tubercular infiltration*, which is especially the case when the seat of inflammation is in the upper regions of the lungs. In such cases the fever does not leave altogether, but shows some aggravation every night; cough, dyspnœa, and the dull percussion sound of hepatization continue, while auscultation reveals bronchial breathing and bronchophony.

Or, the hepatized lung may become *indurated or cirrhosed;* the interstitial tissue growing tense and rendering the air-cells impervious to air. The patient is almost free from fever, but recovers very slowly in strength, and we observe, for a long time, the dull percussion sound and the bronchial breathing; whilst the thorax, in these places, gradually sinks in.

Or, the whole morbid process may end in *gangrene*, which happens very seldom, and which is easily diagnosticated by the sudden general collapse and the cadaverous smell of the breath and expectoration, which is dark-blackish and copious.

The mean or average time which it takes for pneumonia to run its course, if it is not interfered with by medicines, is, as above stated, twenty-five days. But this average may, by judicious treatment, be considerably shortened; for pneumonia can be arrested in each of its stages. The most interesting data in this respect have been brought forth by Dr. Eidherr, of Vienna, who has collected all cases of pneumonia out of a large hospital practice, which had been recorded there for ten years. From these data it appears that under the application of the sixth decimal attenuation of the appropriate remedies the average came down to nineteen, under the application of the fifteenth potency to fourteen, and under the application of the thirtieth potency to eleven days.

Therapeutic Hints.

Sulphur, according to Eidherr, when *exudation sets in;* that is, when auscultation reveals the crepitation sound.

Iodine or **Iodide of Potash**, according to Kafka, *at the beginning* when the disease localizes itself.

Bromine, according to the same observer, in *extensive hepatization of the lower lobes;* whilst

Phosph., in *capillary bronchitis* or catarrhal pneumonia; and

Tart. em., in *pleuro-pneumonia;* that is, in inflammation of the lung and pleura at the same time.

These are the remedies which, by practical experience, are based upon the pathological state of this disease. It would be a grand mistake, however, should we stalk away with these remedies in our pockets and think we were made! For we must never forget that the individual remains an individual; even if it should happen to have a nose like other folks. The pathological state and appearance is *one* expression of the diseased organism, but there are many more utterances by which it speaks to the observing physician. They are numerous and varying; and just because they are, we must not let them pass unnoticed, nor allow ourselves to be ruled by general indications. *Qui bene distinguit bene docet,* and who individualizes best will cure most. Other indications are—for

Aconit., first stage, high fever; must lie quietly upon the back; can't lie on the right side, by stitching pain on left side.

Arsen., great anxiety and restlessness, with tossing about; great thirst, but drinking little at a time; burning and heat in the chest; pale face; cold extremities; prostration.

Bellad., congestion towards the brain; delirium; sleepiness, with inability to go to sleep; starting in sleep.

Bryon., inclination to lie perfectly still; the slightest motion increases all the symptoms; great thirst; wanting large draughts of water; or little or no thirst, with dryness in the mouth.

Carbo veg., in the third stage; rattling in chest; cough by spells; brownish expectoration; bluish face and lips; feet cold, pulse small, weak; sopor; delirium.

Chelidonium, right side; bilious symptoms; pain under right shoulder-blade; great and quite irregular palpitation of the heart. Rademacher.

Cuprum, previous catarrh in chest in form of cough, or in bowels in form of diarrhœa; sudden attacks of dyspnœa unto suffocation:

face earthy, dirty, bluish, seldom red; roof of mouth always red; sweat not profuse, sometimes sour-smelling, without relief; diarrhœa.

Ferrum, no ailments previous to the chill; dyspnœa increases slowly; face pale, and, in adults, it becomes collapsed, hippocratic or expressionless, stiff and stupid; the roof of the mouth always white; skin neither cold nor burning hot; pulse neither full nor hard; stool consistent, brown.

Lachesis, great dyspnœa, worse in the afternoon or after sleep; left side; *badly*-smelling stools even if formed.

Lycopod., circumscribed redness of face, sweat without relief; fan-like motion of nostrils; crossness after getting awake.

Mercur., bilious symptoms; diarrhœa; right side.

Nitrum, annoying feeling of heaviness in the chest, as though some great load were pressing the thorax together; can drink only in little sips for want of breath; dyspnœa, unto suffocation.

Nitr. ac., in protracted cases; in weak, cachectic individuals, where there is a sudden abatement of pain, and yet an increase of the pulse in smallness and quickness.

Rhus tox., restless moving, because lying still, increases pain and dyspnœa; tongue red at its point.

Sanguinaria, second and third stage, extreme dyspnœa; tough, rust-colored sputa; the patient lies upon his back; there is not much pain in his chest, and that of a burning, stitching character; pulse quick and small; face and extremities inclined to be cold, or hands and feet burning, with circumscribed redness and burning heat of the cheeks, especially in the afternoon.

Tart. em., great rattling of mucus; much coughing, with copious frothy expectoration, or else no expectoration; œdema of the lungs; impending paralysis of the lungs; greatest dyspnœa, and fits of suffocation; cyanosis.

Veratr. vir., in the beginning, when the pulse is hard, strong and quick, indicating an inflammatory state; sinking, faint feeling in pit of stomach; regularly intermitting pulse.

Tuberculosis Pulmonum.

Tubercles are round, grayish and resisting granules of the size of poppy-seeds. They are found either solitary or dispersed through the lung-parenchyma, or conglomerated into bunches of the size of a pea, or larger, which, at their periphery, show a fine granulated appearance; in the centre they are softer. One or both apices of the lungs

are generally the first places to be invaded. Tubercles may undergo different changes:

1. They may dry up and become obsolete by reabsorption; or,

2. They may become isolated or shut up into a fibrinous and tendinous capsule, when they are changed gradually into a chalky mass; or,

3. They may soften into a yellowish, cheesy substance, which gradually dissolves itself into pus or ichor, destroying more or less of the lung substance. In this way *abscesses* are formed, which, when they become emptied, leave corresponding *cavities* in the lungs, (vomicæ.)

This process of solution of the tubercular mass is called *phthisis.* Tubercles are rarely found in the fœtus, and in the new-born child up to the fourth month of life. From this period up to the closure of childhood, tubercles form much more frequently in the mesenteric glands and at the base of the brain, than in the lungs; causing in the first case intestinal tuberculosis, and in the latter tubercular meningitis. At the time of puberty, and especially at the age between twenty to thirty-five years, tuberculosis of the lungs occurs by far the most frequently. He who up to that time has been free from tubercular affections may consider himself safe for the rest of his life. But when there has been in earlier life a disposition to tubercular formations, new deposits may follow at any period thereafter.

It is said that certain malformations, a contracted, crooked shape of the thorax, also organic diseases of the heart, emphysema of the lungs and goitres, are conditions unfavorable for the development of tubercles in the lungs. A tendency to their formation, however, seems to exist in hereditary predisposition, or acquired debility of the system, which latter may be brought on by various causes; such as, want of proper food and air, excesses of all kinds, masturbation, diseases like chlorosis, acute eruptive fevers, typhus, hooping-cough, pleuritis, pneumonia, and also too frequent pregnancies and too long-continued nursing.

The most frequent *complications* with tubercles are pleuritis, and, in consequence, adhesion of the lungs to the thoracic walls, pneumothorax, tuberculosis of the intestinal canal, with exhausting diarrhœa, Bright's disease of the kidneys, with general dropsy; fatty degeneration of the liver, tubercular meningitis, and sometimes obstruction in the crural vein, which causes the corresponding leg to swell.

If we take into consideration all the gradual and various changes which tubercles undergo, and remember the complications above mentioned, we should conclude, *a priori*, that developed tuberculosis must exhibit the most varied symptoms. There are, however, a few points

which the physician will do well to always bear in mind, viz.: the question whether or not there has been tuberculosis in the family; the gradual and constantly increasing emaciation, and paleness of the color of the skin; great weakness and debility, and frequent flushes in the face alternating with paleness, without any particular cause, or in consequence of the slightest emotion; frequent catarrhal affections, one upon the other, from slightest exposure, bringing forth at first, for a long time, nothing but transparent mucus; when the sputa change, they become muco-purulent, and contain yellow, saturated streaks, well defined from the remaining mass, which is still more or less transparent; a dry, hacking cough, from tickling in the throat, excited by talking or swallowing fluids, which go the wrong way; repeated spitting of blood; accelerated pulse towards evening; getting out of breath on going up stairs, or making any little extra motion, which the patient generally minds least; suppression of the monthly flow in females, and the pink-red line on the lower gums.

A further examination reveals the following *physical signs:*

Inspection. The subclavicular region of the thorax sinks in, and the clavicles become prominent; the whole thorax is flat and elongated, and the shoulder-blades stick out; the respiratory motion decreases or ceases altogether in those places, and in far advanced cases the respiratory motion takes place only at the lower portion of the thorax. The whole body of the patient is emaciated, pale, and covered by a loose, thin skin. But there are cases where the thorax shows no such aspect, but appears finely developed.

Palpation reveals stronger fremitus in one or the other subclavicular region, and in the commencement an increased impulse of the heart.

Percussion affords, at the beginning of the disease, no results whatever, because single tubercles cannot alter the sound, as they are surrounded by healthy, air-containing lung tissue. Only when they conglomerate into large masses, and thus deprive the lung of air, the percussion sound becomes dull; and this is observable mostly in the infra-clavicular, acromial and supra-scapular region. If at a still later period cavities have formed, with tense, smooth walls, well adapted for reflecting sound, and if they are near enough to the thoracic walls, percussion may yield a tympanitic sound, or a metallic tinkling, or even a cracked-pot sound, (if the cavity be connected with large bronchi,) so that through percussion the air is forced out of the cavity into the bronchial tubes.

Auscultation yields at first an *increased* and *prolongated expiratory*

murmur, (Jackson,) which is often heard in two distinct jerks; also fine rattling noises, which, from coughing, disappear only for a little while, (Niemeyer.)

When the tubercles commence to dissolve, we often hear the "*click sound.*"

After the lung tissue has become infiltrated by tubercular masses, we hear, on auscultation, *bronchial breathing* and *bronchophony,* and all kinds of rattling noises.

When cavities exist, which, with their smooth and tense walls, are well adapted for the reflection of sound, we hear the *emphoric echo* and *metallic tinkling,* also the *cavernous noise.*

The pulsation of the heart is generally heard, even on the *right* side, quite distinctly.

These are the signs by which we are enabled to diagnosticate the presence of tubercles; but how to cure this dreaded malady, which, according to statistics, furnishes over one-fifth of all the deaths which occur, they teach very little. Some cases get well, the tubercles becoming obsolete, and we do not know the why or wherefore; whilst others, under the same and the most careful treatment, nevertheless end in death.

Therapeutic Hints.

General rules, which may serve rather as preventatives: Fresh air, and plenty of it; exercise in the open air, and gymnastic exercises, which tend to widen and strengthen the chest; methodical breathing-exercises, for the same purpose, which consist in regular, slow, and full inspirations and expirations, singing; a good and nourishing diet, and a careful attention to the skin by rubbing and washing, in order to keep up its activity, and to harden it against atmospheric changes.

About the time of puberty, every thing that can should be done to prevent the excitement of sexual desires, such as reading loose literature. Masturbation is in the highest degree hurtful; mental exertions, and depressions of all kinds, are also injurious.

When catarrhal affections set in, they must be treated according to their special symptoms, and so also all other features, changes, and processes of the disease.

When a well-selected remedy is allowed to act, it manifests itself—according to *Nusser's* observations—generally in one of the following symptoms, which are *favorable:*

1. Swelling of the glands in the axilla; or,

2. Rheumatism in the muscles of the neck, shoulders, thorax, hips or extremities; or,

3. Swelling of the glands on the neck and ear; or,

4. The materia peccans rises from within towards the outside, contrary to the air, which passes during respiration from without inward. The chest feels lighter, but the trachea and larynx become affected in a manner to produce hoarseness, which subsiding, the nose becomes sore, and finally ends with pimples and pustules around the nose; or,

5. The ears become affected, from mere ringing in the ears to suppuration within them; or,

6. The eyes become inflamed; or,

7. Headache and toothache set in; in such a case, let the patient suffer; a sudden suppression of them would quickly bring back all the troubles to the chest; or,

8. An eruption on the thorax, with or without itching on the chest or back; or,

9. Sweating of the feet; or,

10. Hemorrhoidal irritations and tumors; or,

11. Violent colds in the head; which may indicate Aconite or Phosphorus, and which almost always act beneficially; or,

12. The morbid action goes down into the intestines, and throws out gall, acid, mucus, or gas, until finally it develops itself in a cutaneous disease, first attacking the head, the upper extremities, the thorax, and so all the way down, like small-pox.

When a well-selected remedy brings forth any of these symptoms, never disturb its action by change or repetition.

Special Hints.

Aconit. may now and then be indicated for intervening pleuritic attacks or hemorrhages.

Arsen., utter prostration; dyspnœa; exhausting diarrhœa; intermitting chills; fever and sweats; thrush in the mouth.

Calc. c., cough worse in the morning; loose; with rattling in the chest; easily perspiring, with fatigue from any little exertion; congestion towards the head; dizziness on going up stairs; paleness of face, with frequent flushes; nightly seminal emissions; too early and too profuse catamenia; inclined to looseness of the bowels; worse towards evening; falling away in flesh.

Carbo veg., cough in hard spells, not ceasing until masses of green or yellow, or purulent and offensive, sputa are discharged; hoarse-

ness, worse in the evening; cool skin; cold knees at night in bed; great prostration; hippocratic face.

China, after loss of blood, long-continued nursing, seminal emissions; intermitting fever.

Cimicifuga, in those intercurring congestions and inflammations from exposure, with a dry, harassing cough; also is it said to act beneficially in night-sweats and diarrhœa.

Dulcam., after taking cold from change of weather; tough, greenish expectoration, with moderate cough; stitching pain here and there in the chest; diarrhœa.

Ferrum met., flying pains in the chest; spitting of blood; feeling of fulness and pressure in the pit of the stomach; vomiting of ingesta; paleness of the buccal cavity; painless diarrhœa; watery menstruation; hectic fever. Especially in persons who, in consequence of any little emotion or exertion, flush easily in the face, or get epistaxis, or cough, dyspnœa, spitting of blood, or palpitation of the heart.

Hepar, cough excited when any part of the body gets cold by being uncovered; chilliness in the open air; paleness after any exertion; perspiration easily excited; afterwards burning redness of the face, and dry heat in the palms of the hands.

Iodium, constant tickling inclination to cough in the wind-pipe and under the sternum, with expectoration of a transparent mucus, sometimes streaked with blood; morbid hunger even soon after a meal, and yet loss of flesh; or else total loss of appetite; morning-sweat.

Kali c., stitching pain in the temples, eyes, ears, teeth, chest, and different parts of the body; after dinner, nausea, faintishness, sleep; about noon, chilliness; at night, heat; about three o'clock in the morning, cough worse than ever. Easily frightened; a slight touch of the feet causes the patient to jerk them up in affright; nursing mothers.

Lachesis, cough worse after sleep, only through the day; but also during sleep without wakening; expectoration difficult, has to hawk, hem, cough, and spit a good while before he succeeds in getting a little tough phlegm away. Fever worse in the afternoon; stools smell very offensive, even if of a natural consistency.

Lycop., expectoration of large quantities of pus; cough day and night; hectic fever, circumscribed redness of the cheeks; worse from four to eight P. M.; night-sweats.

Myrtus communis, stitching pain in the left chest from the upper portion straight through to the left shoulder-blade, worse from breathing, yawning, and coughing.

Nitr. ac., thirst early in the morning; habitual looseness of the bowels.

Phosph., cough worse, dry and tight before midnight, tormenting; worse also from talking or cold air; during cough bursting pain in the head and soreness in the chest; bowels loose; night-sweats during sleep; puffiness around the eyes.

Sanguin., breath and sputa smell badly, to the patient himself disagreeable; before and after coughing, belching of wind; after the cough, heat, and after the heat, gaping and stretching; circumscribed redness of the cheeks; diarrhœa; night-sweats; pain in lower extremities.

Silic., profuse discharge of fetid pus; formation of cavities; night-sweats; pale, wax-like appearance of the skin.

Spongia, cough worse from evening until midnight, from cold air, from talking, singing, or moving; better from eating or drinking

Stannum, feeling of great weakness in the chest; can talk only a few words at a time for want of breath, pressure and bloatedness of the stomach always after eating; great lassitude; hands and feet feel heavy and are cold, or else burning hot; constant chilliness alternating with flushes of heat; profuse night and morning-sweats; profuse expectoration, mostly of a sweetish taste.

Sulphur, dryness and burning in the throat; the breath appears hot to the patient; cough mostly dry, only now and then profuse discharge of purulent matter, which relieves for a while; the patient complains constantly of being too hot; congestion towards the head and chest, with palpitation of the heart; profuse sweating at night; diarrhœa worse in the morning; after suppressed itch or other chronic eruptions.

Acute Miliary Tuberculosis, *Granular Phthisis.*

It consists in a rapid formation of innumerable little transparent granules not larger than poppy-seeds, dispersed uniformly all over the lungs and the pleura; we find them likewise in most cases all through the liver, spleen, kidneys, and on the pia mater. This shows at once that this disease must be the result of a general disturbance in the nutritive action of the system. Still, we do not know its real cause; only so much is certain, that it seldom befalls healthy persons. We find it mostly associated with tuberculosis pulmonum, or during the progress of acute and chronic diseases, or during the time of reconvalescence. When it is associated with an

already established tuberculosis of the lungs it cannot be diagnosticated; for the increased fever, dyspnœa, &c., may just as well be considered a natural increase of the pre-existing malady. When, however, it attacks individuals, who seemed up to that time comparatively free from pulmonary complaints, we observe the following symptoms: frequent and repeated attacks of chills followed by fever; frequent pulse; dyspnœa; cough; profuse sweat; dry tongue; stupor; delirium, thus closely simulating a case of typhus. *Physical* examination reveals nothing, because there is enough sound lung tissue around the tubercles to preserve the normal percussion sound; only fine rattling noises are here or there perceivable, which, however, is nothing characteristic. In some cases the infiltration of the pia mater causes a basilar meningitis, when, of course, the symptoms change accordingly.

Differential Diagnosis from Typhus.

Cough and dyspnœa set in earlier and more intensely than in typhus.

Typhus exanthematicus has its pathognostic eruption, and so has the abdominal typhus mostly at least a roseola eruption on the upper part of the abdomen; there is nothing of the kind in acute tuberculosis.

Abdominal typhus has always an enlarged spleen; miliary tuberculosis in a much less degree, if at all.

Abdominal typhus is mostly characterized by meteorism, thin discharges from the bowels, soreness of the ileo-cæcal region; miliary tuberculosis has no such symptoms.

Typhus never associates itself with tuberculosis; miliary tuberculosis mostly grows upon it.

The temperature in miliary tuberculosis amounts rarely to 40° C.; in typhus over 40°.

The prognosis is, as far as our records reach, quite unfavorable. In most cases it ends its rapid course within fourteen days; in others it lasts some five or six weeks. The patient is, so to say, consumed by the continuous fever, his pulse grows smaller and more frequent, the heart loses its propelling force, and, in consequence, the blood stagnates in the pulmonary veins, causing œdema of the lungs, paralysis of the bronchial muscles, and thus final suffocation.

Therapeutic Hints.—At the commencement compare Apis, Ars., Bell., Bry., Calc. c., Gels., Lach., Phos., Sulph.

At a later stage, Amm. c., Ars., Carbo veg., Lach., Opium, Tart. em., Ver.

Emphysema Pulmonum.

It is an enlargement of the air-cells, either from distention, or from a union of several of them in one, by destruction of their partition-walls; or it is a transmission of air into the interstitial or subpleural cellular tissue. Accordingly, we find on post-mortem examination the lungs swell out of the thoracic cavity like a cushion filled with downy feathers; and if rubbed between the fingers we do not feel that peculiar crepitation of a healthy lung; the air-cells are widened, sometimes to the size of peas. In the second case, where it consists in an escape of air into the interstitial or subpleural cellular tissue, the pleura pulmonalis is raised into little blisters, which, by pressure with the fingers, can be shifted; in rare cases only is the pleura separated and filled by air to a large extent.

This state of things is the consequence either—1, Of violent *inspiratory* actions, whereby the air-cells become overfilled with air, but not emptied again, on account of inflammatory swellings of the bronchial mucous membranes, or the presence of tough phlegm within them—conditions which are frequently found in pneumonia, tuberculosis, bronchitis, &c.; or, 2, Of violent *expiratory* efforts, whereby the glottis is closed either spasmodically or voluntarily, so that the air, instead of escaping freely through the mouth and nose, is forcibly driven back into the air-cells. Such conditions we find from the effects of hooping-cough, lifting heavy loads, playing the flute or similar instruments, straining, &c.; or, 3, Of some unknown causes, by which the walls of the air-cells become destroyed and thus grow into larger air-containing vesicles.

If we bring all this clearly before our minds, we can easily perceive the consequences which will necessarily follow from such conditions. As, for instance, that a portion of the inhaled air remains in the distended air-cells; consequently the air is never fully renewed by the act of respiration, and, of course, the blood does not get sufficiently aërated; hence, it becomes overcharged with carbon and deficient in oxygen. In the further progress of the disease still more of the air-cells perish as their partition walls become destroyed; consequently still more of that surface is lost by which the oxygenization of the blood takes place, and, therefore, the insufficiency of respiration and the accumulation of carbon in the blood grows greater in the same ratio. This the patient shows by his *dyspnœa*, by his great hunger for air. He strains all the muscles to widen the thorax and

to get breath, and, in consequence, the thorax becomes *arched, barrel shaped, permanently dilated*, and the muscles of the neck voluminous.

Another consequence, though later in appearing, is disturbed *circulation*. Hand-in-hand with the destruction of the air-cells goes the obliteration of the capillaries. The blood from the right ventricle does not find room within the lungs. Stagnation follows, and, in consequence, hypertrophy of the right ventricle with all its usual consequences, viz.: undulation of the right jugular vein; cyanosis of the face; varicosed veins on the cheeks and alæ nasi; swelling of the liver; catarrh in stomach and bowels; swelling of the hemorrhoidal veins; scanty urine, &c.

Its physical signs, on *inspection*, are, the arched, barrel-shaped, permanently dilated thorax from its upper region down to the sixth rib. However, this condition does not obtain in all cases. We find it only in those persons in whom the emphysema originated in forced expirations and closed glottis, at a time when the bony structure of the chest was yet yielding. In other persons, with a long, flat, so-called paralytic thorax, emphysema may exist to a large extent without any such alteration of form. The hollow places above and below the clavicles bulge out during a fit of coughing, the neck appears short and thick, and the respiratory motion, notwithstanding the greatest exertion, is short, superficial, and, instead of being a successive motion of the single ribs, is a movement of the whole surface at once, a mask motion. The intercostal spaces do not bulge out; on the contrary they often sink in during inspiration.

Palpation, if emphysema exists in the left lung, discovers the point of the heart lower down and towards the pit of the stomach, on account of the lower position of the diaphragm.

Percussion affords the best pathognostic sign of emphysema, inasmuch as we may with certainty ascertain by it whether the dull sounds of the heart and liver exist in their proper places or not. If we hear lung sound, where we ought to hear the dull sound of the heart or liver, we may be sure that heart or liver are covered by the distended lung. *Characteristic* of emphysema, therefore, *is an abnormal extension of the lung sound over heart and liver. Tympanitic* this sound cannot be, because the air-cells are forcibly distended.

Auscultation affords no very positive information. In the presence of a catarrh, which is quite often the case, we hear no vesicular breathing, but the more rattling and bubbling noises. In the absence of catarrh the vesicular breathing is clear enough.

An emphysema which is confined to a small place is not diagnosticable at all.

The progress of this disease is always slow, of a chronic nature, and its more acute attacks depend always upon an increase of bronchial catarrhs, which, more or less, always accompany it. It usually ends in general dropsy, as a natural consequence of those obstructions in the circulation which have been detailed above. The patient may live to a good age.

Therapeutic Hints.

Arsen., highest degree of dyspnœa, even unto suffocation, with great anxiety and restlessness; face cyanotic and covered with cold perspiration.

Bell., when there exists disturbed circulation; dizziness, headache; palpitation of the heart; fulness of the abdomen.

Brom., after pneumonia, asthma; pressure in the stomach; must sit up in bed at night.

Camphor, asthma worse after any bodily exertion; cough from talking, inhaling of air, and a feeling of coldness, which commences in the pit of the stomach and spreads from here over the chest and is exhaled as cold breath.

Carbo veg., often after Arsen.; great dyspnœa; cough in violent spells, with great anxiety, with watery, profuse expectoration, and under great exertion.

Chinin. arsenicosum, regularly every forenoon at nine o'clock attacks of suffocating spells in tuberculosis; limbs icy cold; cold, clammy sweat all over; greatest anxiety and unquenchable thirst; must sit up, bent forward, if possible, at the open window.

Chlorine, easy inhalation; exhalation impossible.

Cuprum, asthmatic symptoms worse after walking against the wind.

Digital., complications with heart disease; better in lying perfectly quiet in a horizontal position.

Ipec., dry, spasmodic cough of old people; collection of mucus; difficult to expectorate, and giving only temporary relief; nausea.

Lachesis, all covering around the neck and even chest unbearable; worse after sleeping; cough torturing until some little tough phlegm is raised; stool smelling badly; follows well after Arsenicum and Carbo vegetabilis.

Opium, nightly asthma, with whizzing and rattling during expiration, which is long and attended with retraction of the epigastric region; inhalation short, without noise.

Sarsaparilla, asthma worse after eating or motion.

Senega, feeling as though the thorax were too narrow, with constant inclination to widen it by deep inhalation.

Sepia and **Sulph.**, both worse after sleep; getting suddenly roused by asthma from a deep sleep. Difference between both, see Gross' Comparative Materia Medica.

Terebinthina, asthma worse from motion.

Besides these compare Asparagus, Bry., Lobelia, Natr. mur., Nux. v., Puls., Sulph., Tart. em., Ver., and all that is mentioned under Asthma spasmodicum.

Œdema Pulmonum, Hydrops Pulmonum, *Œdema of the Lungs.*

This affection consists of a serous exudation into the air-cells and finest bronchial tubes of the lung, and is either *acute* or *chronic*. Sometimes it is confined to a small portion, and sometimes it extends over both lungs. When *acute*, the lung appears strongly injected with blood, tense, leaving on pressure no dent; when cut in two there oozes out of it a bloody serum, which contains a great deal of albumen. All the air is driven out by the serum, and the lung tissue is easily torn. On account of this similarity with pneumonia acute œdema is also called *serous pneumonia*.

In *chronic œdema* the lung appears pale and tough; upon pressure a dent remains; the serum is pale-yellowish, thin, and contains little albumen; it fills the air-cells and finest bronchial tubes. The lung is heavy and puffed similar to any dropsical swelling, and it is deprived of air as far as the infiltration of serum extends.

The *acute* form develops itself in consequence of congestion during catarrhal affections, measles, scarlet fever, small-pox, and typhus; also during croupous pneumonia, pleuritis, pneumothorax, and emphysema; whilst the *chronic* form is found mostly in consequence of heart disease, tuberculosis, Bright's disease, or as a complication with hydrothorax and ascites.

Its most prominent symptoms are:

1. *Dyspnœa*, which oftentimes reaches such a height that the patient, in the greatest distress, tries all possible positions to get breath—now sitting erect, now bending forward and supporting the head with the arms, &c.

2. *Spasmodic cough* with a great deal of frothy and serous expectoration.

3. *Cyanotic symptoms*, in consequence of the obstruction to the cir-

culation; and finally, if the breathing is still more impeded, and the blood becomes overcharged with carbon.

4. The patient sinks, his cheeks grow livid, and he dies of asphyxia.

Physical Signs.

Inspection and palpation show, notwithstanding the greatest efforts of the patient to draw in air, a *decrease* in the respiratory motion of the thoracic walls.

Auscultation reveals all sorts of rattling and bubbling noises.

Percussion, however, gives no results, unless the lung has become deprived of air to a large extent, when, of course, the sound is *dull*, or *tympanitic*, when the lung tissue becomes compressed, so that it loses its natural elasticity.

Therapeutic Hints.

In acute œdema compare Sulph., Scilla, Tart. em.

Arsen., great anxiety; restlessness; always worse towards midnight or soon after.

Phosph., if worse before midnight, with tightness in the chest.

Ipec., spasmodic cough; sickness of stomach; fine rattling noises in the chest.

Tart. em., large bubbling rattling; chest appears full of phlegm without capability of relieving itself.

Laches., suffocating fits; worse after sleep; dark, almost black urine; offensive discharges from the bowels.

Carbo veg., collapsed state.

Ammon. carb., somnolence; poisoning of the blood by carbon.

Compare Asthma, Pneumonia, &c.

Gangræna Pulmonum

Is a process of mortification of the lung tissue, which manifests itself by the putrid smell of decay of the exhaled air, and the cadaverously smelling and discolored expectoration. When the gangrenous portions become encysted, shut off by surrounding healthy tissue, these signs of course are absent, and in such cases the disease is not diagnosticable at all. There may also be putrescence of the contents of abscesses in the lungs, causing a similar odor of the breath and sputa, without gangrene of the lung substance. Its other symptoms are not characteristic, and may just as well belong to catarrhal or pneumonic affections of the lungs. Bock.

Hæmoptoë, Hæmoptysis, *Hemorrhage from the Lungs.*

When bleeding takes place in the capillary blood-vessels of the bronchial tubes, the blood is coughed up in smaller or larger quantities, of a bright or dark color, thin or coagulated; this is called *hæmoptysis—blood-spitting.*

When, however, larger blood-vessels burst, in consequence of tubercular cavities or abscesses, then the blood gushes out of the mouth and nose in a stream, and this is called *pneumorrhagia*, or *hemorrhage from the lungs.*

Sometimes the exuded blood is not brought up at all; it collects in the lung-parenchyma, and forms *hæmoptoic infarcts;* which, if cut open, show a black shining surface, of an uneven, granulated appearance. Their size varies from that of a pea to that of a walnut; they contain no air, and sink in water.

When, in consequence of infiltration with blood, the lung-parenchyma gets torn, then the blood of course fills the whole opening, and constitutes what is called *pulmonary apoplexy.*

All these different forms of lung-bleeding yield no characteristic physical signs; only, if the hæmoptoic infarct is pretty large, and near the thoracic walls, or if there be pulmonary apoplexy, we hear the *dull* percussion sound. I do not believe in bothering patients of this kind with thumping and knocking their chests; it causes excitement, and may increase the difficulty without indicating any means for relief.

If hæmoptysis be brought on by external injuries, it is generally of no great importance, provided the injury is not too severe. Of much greater importance are such cases where the bleeding takes place in consequence of tubercular deposits and disorganizations. In such cases it is apt to recur again and again; sometimes without any or the slightest exciting causes; and such frequent recurrence of bleeding of the lungs does indeed excite, and with good reason, the suspicion of the physician of a new attack of tubercular deposition.

There are also diseases of the heart, as obstruction in the ostium venosum, and insufficiency of the mitral valves, which cause hæmoptysis; and a very frequent cause is the suppression of habitual bleedings, either hemorrhoidal or menstrual.

Therapeutic Hints.

Acon., in many cases; but best indicated by restlessness; agitation;

fright; expression of anxiety in the face; palpitation of the heart; congestion towards the chest and head; fear of death; after wine.

Arnica, after mechanical injury; from slight, bodily exertion; in tuberculous individuals; constant tickling cough, starting either from the larynx or from under the sternum.

Arsen., after venesection, or loss of blood otherwise; great weakness; restlessness; burning in chest and stomach; suppressed menstruation.

Bell., cough from constant tickling in the larynx; congestion to head and chest; stitch-pain in chest, worse from motion.

Carbo veg., pale face; cold skin; slow pulse, intermitting, scarcely perceptible; mostly attended with violent cough in paroxysms and hoarseness, worse towards evening; sometimes burning in chest.

China, after great loss of blood or vital fluids; during nursing, &c.; with all the signs of weakness which arises from want of blood.

Collinsonia can., blood dark, tough, coagulated, enveloped in viscid phlegm; previous discharge of blood per anum; subsequent costiveness.

Conium, especially after masturbation.

Ferrum, always better from walking *slowly* about, notwithstanding weakness obliges the patient to lie down; *quick* motion and talking bring on cough; there is pain between the shoulders; the face has a yellowish tint; sleep is poor at night, and there is frequent palpitation of the heart.

Hamamelis, blood is venous; comes into the mouth without any effort, seemingly like a warm current from out of the chest; mind calm; sometimes taste of sulphur in the mouth.

Ledum pal., where there is stagnation in the liver and portal veins; congestion towards the head and chest; hardness of hearing; tickling in the larynx; spitting of bright-red blood.

Millefolium, in tuberculosis.

Myrtus com., in phthisical persons; sharp pains through the upper part of the left lung, from front to shoulder-blade.

Nux v., especially after high living; suppressed hemorrhoidal discharges; and after fits of passion, &c.

Opium, blood is thick and frothy, mixed with phlegm; absence of all pain; slumber, with starting.

Phos., vicarious spitting of blood for the menses; tubercular diathesis; dry, tight cough; worse from evening until midnight.

Puls., dark, coagulated blood; chilliness; loose stools; suppressed menstruation; crying spells.

Rhus tox., after straining; lifting; blowing of instruments; or worriment and mental excitement immediately renewed; blood bright.

Senecio gracilis, in suppressed menstruation; after venesection.

Sulph. ac., in climacteric period.

Stannum, in phthisical patients, when at the same time there exists copious expectoration.

Tart. em., when, after the attack, there remains for a long time a bloody, slimy expectoration.

In suppressed menses, compare Arsen., Bell., Millefol., Phos., Senecio, Sulph.

After the suppression of habitual bleeding hemorrhoids, compare Acon., Nux v., Sulph.

After wine, Aconite.

After whiskey, Puls., Merc.

After coffee, Nux v.

C. Affections of the Pleura.

Pleuritis, *Pleurisy, Inflammation of the Pleura.*

When we examine, post-mortem, a case of pleurisy, we observe the pleural surfaces injected with here and there pinkish spots and stripes, consisting of enlarged capillaries; also irregular, dark-red, ecchymosed patches of extravasation. The surface of the pleura, instead of being smooth and shining, appears dull and swollen, gradually growing rough and villous from fine new granulations and new cells, which develop themselves upon it. This is the most frequently occurring form of pleurisy without exudation, and therefore called *pleuritis sicca*, dry pleurisy.

In other cases, we observe, in addition to the above-stated features, which are, in fact, the ground-type of all forms of pleurisy, *a scanty fibrinous exudation, covering, like paste, or (if in greater abundance) like a soft, croupous membrane, the inflamed pleuræ.* During the progress of recovery, it gradually becomes dissolved by a fatty metamorphosis, and is absorbed; but those fine granulations and new cells which lie underneath, and which are inherent parts of the inflamed pleura, frequently give rise to *adhesions* of the pleural surfaces. This fibrinous exudative pleurisy accompanies almost always croupous pneumonia.

In still other cases we observe an abundant serous fibrinous exudation, from two to three, even to ten pounds, and more, which collects within the pleural sac. This secretion consists of a greenish-yellow serum and of coagulated fibrinous masses, which partially

float in the serum and partially are deposited upon and adhere to the pleuræ like croupous membranes. There are always more or less of *pus globules* contained in this secretion; and, in consequence of occasional ruptures of the fine capillaries in those newly-formed granulations and cells upon the inflamed surfaces, also *blood*, which gives rise to *bloody exudation*. This effusion is always surrounded and shut off by adhesions. In consequence of, and according to, the mass of the pleuritic secretion, the lung of the affected side becomes compressed to the fourth, sixth, even the eighth part of its normal volume; its arched costal portion is flattened down, and its substance appears pale-reddish, or bluish-gray, or lead-colored, and becomes tough like leather, and is bloodless and airless. Heart or liver become dislocated, if the pleuritic effusion is either on the left or right side. The sound side always shows more or less congestion, and in fatal cases a collateral œdema of high degree.

In case of recovery this secretion is gradually absorbed, frequently leaving between the adhesions yellow cheesy masses, which are residues of unabsorbed pus-globules and fibrinous substances.

In the same degree in which absorption takes place, the lung regains its normal volume and condition, provided the air-cells be not glued together, or closed by fibrinous deposits. In these conditions air could not enter into them, and the lung, or such part of the lung, could not regain its normal expansion. This would cause a vacuum in the thorax, were it not for the pressure of the external air, which at once flattens the corresponding portion of the thoracic walls down, or pushes heart or liver higher up into the thoracic cavity.

In still other cases, and lastly, we find the exudation into the pleural sac to be *purulent;* that is, so full of *pus-globules* that it forms an opaque, yellow, thickish fluid, and hence is called *empyema* or *pyo-thorax*. Even in such a case absorption is possible.

When, however, the pleural substance itself becomes involved in the suppurating process, it causes softening and perforation of its tissues, and the purulent contents escape *outside*, either through the thoracic wall, in case the pleura costalis be destroyed, or through the bronchial tubes, and is coughed up, if the pleura pulmonum be perforated.

These four different forms of pleurisy must of course manifest themselves by different symptoms.

The first form, *pleuritis sicca*, when, in consequence of inflammation, new cells form upon the pleural surfaces, but *without exudation*, seems to take place frequently without any particular signs. This

statement seems to be founded upon the existence of many adhesions, found in post-mortem examinations, in persons who had *never* complained of symptoms that could possibly have been taken as indications of pleurisy.

The second form, *with scanty fibrinous exudation*, generally attend pneumonia or tuberculosis. It is characterized by a *sharp stitching pain*, which hinders deep inspiration, coughing, sneezing, and motion, and for this reason the patient can breathe only superficially. If not complicated with pneumonia or tuberculosis, there is scarcely any cough attending it.

On inspection we observe, in consequence of the pain which is caused by breathing and moving, that the patient bends his body towards the affected side, in order to bring the ribs of that side nearer together to prevent their respiratory motion; in consequence of which the spine itself becomes curved, its convexity being directed towards the sound side.

Palpation merely confirms the superficial breathing, and may yield the perception of a grating feel; more, however, towards the end than at the commencement of the disease, after the exudation has been absorbed, when, therefore, the surfaces are dryer and the breathing deeper again, so that the rough surfaces glide more forcibly one upon the other.

For this same reason, *auscultation* reveals the *friction sound* more decidedly towards the end of the disease.

The third form, *with abundant serous-fibrinous exudation*, usually commences with a *strong chill*, followed by *high fever*. The chill is frequently repeated, and the whole affection may look very much like a tertian intermittent fever. It is also characterized, like the second form, *by violent stitching pains* in the sides of the chest, which, however, often subside, or at least diminish, before the inflammation and exudation may have reached their full height. The subsidence of pain is therefore, in this form, not always a sign of conquered disease.

Generally it is accompanied by *dyspnœa* as long as the fever lasts, and in such cases, and where an extensive exudation compresses the lung, and causes a hyperæmic state and catarrh in the adjoining portions of the lung, there is also cough. Otherwise the cough may be absent altogether.

The disease generally reaches its height in about six or eight days, and commences from that time its gradual decline. Fever, pain, and cough cease, and absorption of the pleuritic exudation takes place,

diminishing at first much more rapidly than towards the last, so that sometimes, even after weeks, still some fluid can be detected.

In some cases this form comes on quite stealthily, without either prominent fever, pain, or cough. The patient feels only a gradual loss of strength, some difficulty of breathing; he grows pale, and loses flesh, and thinks that the source of all his troubles lies in his abdomen, especially when, by exudation on the right side, the liver has become dislocated downwards. Even the physician may be astonished when he, by closer examination, finds the whole pleural sac filled with fluid, amounting even from ten to fifteen pounds. Such an enormous quantity, of course, can be absorbed at best only very slowly, being alternately augmented and decreased in the mean time. It terminates finally, in a great number of cases, in tuberculosis.

Physical Signs.

Inspection discovers an enlargement of the thorax in breadth and depth on the diseased side if the exudation is sufficiently large. The intercostal spaces are wider, and are on a level with the ribs, or even bulging out between them. The respiratory motion is much less, or ceases altogether on the diseased side.

Palpation reveals the *absence of the vocal fremitus,* which is the necessary consequence of the intervening fluid between the thoracic walls and the lung; it reveals the *dislocation of the heart or the liver*, and also sometimes the *friction* of the roughened pleural surfaces above the exudation.

Percussion yields a somewhat *duller sound*, in case the exudation be moderate, so as not to compress the lung tissue to such a degree as to drive all air out of it; it yields a *tympanitic sound* if the pressure upon the lung be just sufficient to deprive it of its natural tension and elasticity; it yields a *dull, fleshy sound* if the secretion augments to such a degree as to deprive the lung of all the air; above this dull sound we hear again the *tympanitic sound,* for here the lung, although compressed, is not entirely without air. Variation in position does not change the result of percussion, because, as we have seen, the exudation is always enclosed and bordered by adhesions.

Auscultation reveals an *absence of the respiratory murmur* over the whole part that is covered by exudation. In other cases, however, we hear all over the thorax a loud bronchial breathing, especially in case of dyspnœa; no matter how much fluid intervenes between the

thoracic walls and the lungs, or how much the lungs may be compressed. The auscultatory signs are therefore not very characteristic.

The fourth form, *with purulent exudation, the empyema* or *pyothorax*, differs from the latter only by the abundance of its pus-globules, and is frequently found in consequence of infectious diseases and a general pyemic condition. Its physical signs are all the same as above stated.

When empyema is going to *discharge through the thoracic walls* we observe in the region of the fourth or fifth rib an œdematous swelling, which soon changes into a hard, tense swelling protruding from between the ribs; by-and-by it becomes fluctuating, and lastly it bursts and discharges an immense quantity of pus. This opening sometimes remains for years, forming a *thoracic fistula*, and discharges every now and then larger or smaller quantities of pus.

When the empyema is going to *discharge through the bronchial tubes* there may appear at first symptoms of pneumonia, or the bursting takes place suddenly, when, with violent fits of coughing, the patient throws up large quantities of pus. Even here recovery is possible, though it may happen that the patient suffocates or sinks under the influence of pyemic poisoning of the blood. The empyema may also *discharge downwards through the diaphragm into the abdominal cavity, where it occasions a violent peritonitis.*

Differential Diagnosis between Pleurisy and Pneumonia.

Pleurisy.	*Pneumonia.*
Repeated chills.	One chill.
Catarrhal sputa.	Rust-colored sputa.
Stitching pain.	No pain or dull when the bronchial tubes, and stitch-like when the pleura, is involved.
Enlargement of the thorax.	None.
Absence of vocal fremitus.	Increased vocal fremitus.
Dislocation of heart, liver, or spleen.	None.
Friction sound.	Crepitant sound.

Therapeutic Hints.

Acon., chill; fever; great thirst; quick pulse; dry skin; anxious restlessness; agonizing tossing about; stitching pain in chest; inability to lie on the right side; dry hacking cough.

Arnica, after mechanical injuries; constant changing of position on account of feeling as though the bed were too hard.

Bryon., stitching pain in chest, worse from slightest motion; tongue white; great thirst.

Kali c., when the violent stitching pain does not yield to Bryon.; especially on the left side with violent palpitation of the heart; cough is dry, and worse towards three o'clock A. M.

Mercur., stitching pain through to the back when coughing or sneezing; especially on the right side.

Nitr. ac., in old people, when the pain leaves and the pulse increases; great weakness and diarrhœa.

Phos., in complications with bronchial affections; tightness across the chest; dry, tight cough, which is worse from evening until midnight.

Rhus t., after exposure to wet, or from straining, lifting, wrestling, &c.; tip of tongue red; fever-blisters around the mouth and nose; very restless disposition, notwithstanding the pain.

Squilla, stitching pain in left side; short, rattling cough, disturbing sleep; inability to lie on the left side; grating of teeth; twitching of the lips, which are covered with thick yellow crusts, more on left side; worse in all respects in the morning.

Sulphur, when the pain is in the left side, lower region, going through to the shoulder-blade, and of a more steady nature; lips bright red; follows well after Bryonia or Rhus t.

Tart. em., in pleuro-pneumonia at the commencement; according to Kafka, specific.

With these means we need scarcely ever fail in recent cases. The morbid process being nipped in the bud, it cannot bring forth large exudations. In neglected or badly-treated cases, where the exudation is abundant, or in cases developed in cachectic constitutions, with a pyemic tendency, we shall have to compare Arsen., Calc. c., Camph., Carbo veg., China, Ferr., Hepar, Jod., Lach., Lyc., Sepia, Senega, Silic., and others.

In pyothorax, when the pus is about to discharge itself externally, I would decidedly object to opening the abscess by the lancet, because it is apt to let in air, thus giving rise to pneumothorax, which has almost always proved fatal. If the abscess be let alone, it will take care of itself, break at the right time and at the right place, and let in no air.

Paracentesis has very seldom proved beneficial.

Rumex bull, small sore spot apt [illegible]

Pneumothorax.

This consists of a collection of air or gas within the pleural sac. As air alone, however, is rarely found in this locality, but mostly in combination with *pus*, *blood*, or *serum*, it is called, according to the nature of the coexisting fluid, either *pyo*, or *hæmo*, or *hydro-pneumothorax*.

Pneumothorax, whether it be in combination with fluids or not, is always characterized by an enormous extension of the thoracic wall of the affected side, the intercostal spaces of which bulge out. When on the left side, it pushes the heart towards the right; if on the right, it presses the liver down into the abdominal cavity. The lung itself is compressed to a small volume, containing little or no air, and lying close to the spine.

The gas, which is collected within the pleural sac, consists mostly of carbonic acid gas and nitrogen, with very little oxygen; and in cases where decomposition has taken place, of sulphuretted hydrogen. These gaseous substances may be diffused, and fill the whole pleural cavity of one side, or they may, in rare cases, be limited therein to a certain portion, in consequence of previous pleuritic adhesions.

The entrance of air into this cavity almost always causes in a short time a pleuritis with either sero-fibrinous or purulent exudation; and is occasioned either *by a perforation of the pleura pulmonum*, in which case the air enters from the air-cells of the lungs; or *by a perforation of the thoracic wall*, when the air enters from without; or *gaseous substances may be formed by means of decomposition in a pyothorax*.

In cases in which the air fills the pleural sac through the lungs, it takes place almost always quite suddenly, and the patient has a feeling as though something had burst in the chest; which is in fact the case. At the same time he experiences great difficulty in breathing; he is obliged to sit erect, and can lie only on the diseased side, and for an obvious reason,—to keep the sound lung free from any pressure. The worst cases are those which exist in consequence of tuberculosis, gangrene, or carcinomatous degenerations of the lungs. Those in consequence of emphysema or external perforations are not so violent.

Physical Signs.

Inspection. Enormous enlargement of the diseased side of the thorax; its intercostal spaces bulge out; perfect want of respiratory motion.

Palpation. Total absence of vocal fremitus; liver or spleen dis-

placed downwards; heart towards the middle or the right side of the thorax.

Percussion. Tympanitic sound, unless greatly distended, when it becomes non-tympanitic, or full lung sound. Dull sound in the upper posterior region, where the compressed lung lies, and in the lower regions of the thorax, when effusion exists; changing locality with the patient's change of position.

Auscultation. Absence of respiratory murmur by full resonant percussion sound; metallic tinkling when the patient talks, coughs, or inhales deeply. Bronchial breathing and bronchophony, where the compressed lung lies.

In cases where air and fluids co-exist we hear a splashing sound whenever the patient moves quickly, just like water in a half-filled bottle, if it be shaken.

Likewise do we sometimes hear a falling of drops with a metallic tinkling sound, when the patient rises from a recumbent position.

Differential Diagnosis.

Pneumothorax differs from *emphysema* by its dyspnœa coming on suddenly and growing worse steadily; by its one-sided distention of the thorax, the intercostal spaces of which bulge out; by its want of vocal fremitus, the absence of the vesicular murmur, and the presence of the metallic tinkling sound.

It differs from *large superficial cavities,* by the distention of the thorax and the displacement of heart, liver, or spleen, and the absence of vocal fremitus.

Therapeutic Hints.

For the sudden dyspnœa, Arsen.

When caused by external injury, Acon., Arn, Staphys.

When in connection with tuberculosis, compare the remedies mentioned there.

For the subsequent inflammation of the pleura, compare Pleuritis and Pneumonia.

Hydrothorax, *Dropsy of the Chest.*

This is a collection of serum in the pleural sac, without any inflammatory process in that locality. It is mostly found on both sides of the chest at the same time, although one side may contain more fluid than the other. The serum is clear, yellowish or greenish; sometimes reddish, when mixed with blood; it never contains fibrinous substances,

as an exudation of pleurisy always does, but in place of it a great deal of albumen. The pleura itself looks pale and dull, without any sign of inflammation; the lung is pressed towards the spine whenever a large amount of such fluid exists, and generally appears œdematous.

Hydrothorax originates mostly in consequence of lung and heart diseases, which cause obstruction to the venous circulation within the lungs; or in consequence of such morbid states of the body as cause the blood to become thin and watery, as is the case in Bright's disease, in certain spleen and liver affections, in anæmia, in intermittent cachexia. It is, therefore, almost always attended by other dropsical conditions.

From this it is apparent that its symptoms must vary greatly. Its most prominent feature, however, is *dyspnœa*, *which is always worse in a lying*, and *better in a sitting position*, and this for obvious reasons: when sitting the fluid settles to the lower part of the thoracic cavity and leaves the upper part of the lungs free for respiratory action; whilst in a horizontal position the whole lung becomes overflown and compressed by the fluid. Where there is a great deal of serous effusion *the patient seems to suffocate whenever he turns in bed.* Niemeyer explains this important sign in the following manner: as the fluid is not limited to a certain place, as is the case of pleuritic effusions, it changes its position freely whenever the patient changes his position, following the law of gravitation. Wherever it locates, there it naturally compresses the lungs, makes them unfit for respiration, whilst the uncompressed portion fulfils this office undisturbed. A turn of the body reverses at once the location of the fluid; it now compresses those portions of the lungs which were breathing, and sets others free that were compressed. Ere these can be pervaded by air the patient has no breath. This explains fully those suffocating fits which such patients experience when turning in bed.

Physical Signs.

Inspection. Enlargement of the thorax.

Palpation. Absence of vocal fremitus and displacement of heart, liver, spleen.

Percussion. Dull sound as far as the fluid reaches, changing locality in different positions of the patient.

Auscultation. Absence of vesicular breathing where the fluid covers the lungs, but bronchial breathing about the spine, where the lungs are compressed.

Therapeutic Hints.

Apis., great oppression; inability to lie down; absence of thirst; urine dark like coffee; after taking cold during desquamation in scarlet fever.

Apocynum cannabinum, inability to speak; catching of the breath; irritability of stomach so great that even a draught of cold water is rejected; suppression of urine.

Asclepias syriaca, recommended especially after scarlet fever.

Arsen., dyspnœa, worse from any exertion; when lying down at night, if ever so carefully, the patient experiences a sense of suffocation; also when turning in bed; with great anxiety; palpitation of the heart, and great dryness; drinking constantly but little at a time.

Asparagus, old people with heart diseases.

Bryon., pain in the side; cough, with contraction of the diaphragm; vomiting and splitting pain in the head, excited by any motion; retarded stool and frequent desire to pass water, but only a few drops flow.

Colchic., asthma; œdematous swelling of hands and feet; constant urging to pass water, as from spasm of the bladder, but only little is voided and that with great pain; heart disease in consequence of acute rheumatism.

Digit., intermitting pulse; pale face; cold skin; flabby, œdematous swelling all over; difficult urination; cyanotic symptoms, with fainting.

Helleb., slow comprehension; slow in answering questions; pale face; griping pain in the bowels, with diarrhœa of a jelly-like slime.

Kali c., whizzing breathing; oppression worse about three o'clock in the morning; œdematous swelling between the eyebrows and lids, looking like a little bag; insufficiency of the mitral valves; great dryness of the skin.

Lachesis, suffocating fits, waking from sleep, with throwing the arms about; cyanotic symptoms; swelling of the liver; black urine; offensive smell of feces.

Lycop., dyspnœa worse when lying on the back; constipation, rumbling in the left iliac region; red urine; exceedingly cross after getting awake.

Merc., after scarlatina; œdematous swelling all over; sweating without improvement; dry, hard cough; inflammation of the genital organs.

Squilla, strong urging to urinate, with scanty and dark urine; con

tinuous cough, with mucous expectoration; œdematous swelling of the body.

Senega, loose, faint, hacking cough, with expectoration of a little phlegm.

Spigelia, dyspnœa during motion in bed; can lie only on the right side and with the trunk raised; danger of suffocation when making the least motion or raising the arms, with anxiety and palpitation of the heart.

Sulphur, sudden arrest of breathing at night in bed when turning to the other side; going off when sitting; constipation, or diarrhœa in the morning; liver complaint; red lips.

Tart. em., much coarse rattling in the chest; expectoration not equivalent to the secretion within; drowsiness; cyanotic symptoms.

Hæmothorax

Is a collection of blood within the pleural cavity, which is brought on either by external injuries of the chest, as wounds from stabbing, gunshot wounds, fracture of the ribs, contusions, or from internal ruptures of blood-vessels, carcinoma and tubercles.

The patient complains of sudden dyspnœa, with or without cough; his face grows pale; he faints, has ringing in the ears; darkness comes before his eyes, and the skin is cold.

Physical signs the same as in Hydrothorax.

Therapeutic Hints.—When from external causes, compare Acon., Arn., Calendula, Erigeron, Hamamelis, Rhus t., and the like. When from internal causes, they must be considered in each individual case, and reference should be taken to those remedies which are indicated in hemorrhages from the lungs. Great loss of blood indicates China, and a nourishing diet.

For the subsequent pleuritis, compare the corresponding chapter.

THE HEART.

AUSCULTATION.

First step: To know how the heart works.

The heart consists of four apartments; two antechambers (auricles) and two chambers, (or ventricles,) which are respectively named from their position, right and left.

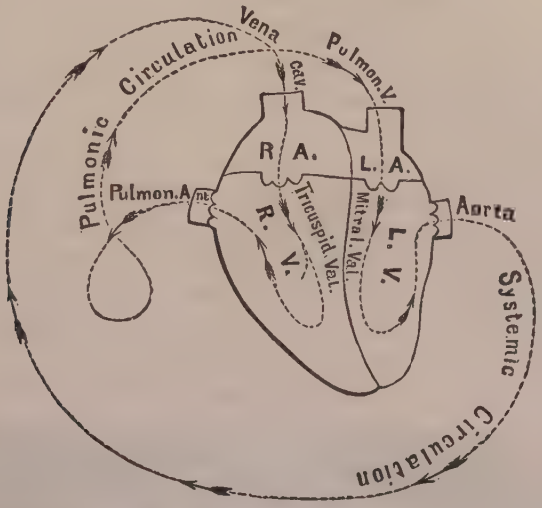
Into the right auricle the venæ cavæ empty all the blood which has been used in the body for its sustenance. From this antechamber a large aperture leads into the right ventricle, which is called the *auriculo ventricular opening*, and which is guarded by a kind of gate, consisting of three triangular folds, (the *tricuspid valves*,) opening inward. In the right ventricle we observe another opening, which leads into an artery called the *pulmonary artery*, because it brings the deoxygenized blood into the lungs. This opening is likewise guarded by a set of valves, which, from their half-moon shape, are called *semilunar valves*, and which open outward.

This arrangement we find repeated in the left auricle and ventricle. Into the left auricle the pulmonary veins empty all the blood which has been oxygenized in the lungs. From this cavity a like aperture leads into the left ventricle, which is likewise guarded by valves, consisting, however, of only two segments, (*the bicuspid or mitral valves*,) opening inward.

In the left ventricle we observe also an opening, which leads into an artery called the *aorta*, and which distributes the blood all over the body. This opening is likewise guarded by a set of valves of semilunar variety, which open outward.

Now let us see how this apparatus works. The ventricles being fully distended, they immediately and simultaneously begin to contract. On account of the relation of the several valves to these two cavities, the action of the blood under the great pressure from this contraction forcibly shuts the tricuspid and mitral valves, thus closing the auriculo-ventricular openings, and the same action opens both sets of semi-lunar valves for the escape of the blood. Through the pulmonary artery the dark blood is propelled to the lungs, whence it is returned through the pulmonary veins to the left auricle, thus making the lesser circuit—the *pulmonic circulation*. Through the aortic valves and artery the red blood is propelled through the whole body, whence it is returned through the venæ cavæ to the right auricle, thus making the greater circuit—the *systemic circulation*. As the two ventricles contract, the two auricles dilate, and *vice versa*. The contraction of the ventricles and simultaneous dilatation of the auricles is called the heart's *systole*, and by causing a forcible closure of the auriculo-ventricular valves produce the *first sound* of the heart. The dilatation of the ventricles and simultaneous contraction of the auricles is called the heart's *diastole*, and by forcibly closing the two sets of semi-lunar valves produce the *second sound* of the heart. This explanation of

the two sounds of the heart suffices for my purpose, and may be demonstrated to the eye by the following diagram:



This first step we must make securely, if we want to get along at all towards reaching the goal of diagnosticating heart diseases: the *first sound* is caused by *the shutting of the tricuspid and mitral valves.* The *second sound* is the consequence of the *shutting of the semi-lunar valves.*

SECOND STEP: HOW TO FIND THE EXACT SITUATION OF THESE DIFFERENT VALVES IN THE LIVING SUBJECT.

In order to find out the position of the heart, and its parts, we must first ascertain *where it strikes against the thoracic wall.*

It does it with its *apex,* and in a majority of cases between the fifth and sixth ribs, about one inch on the right of a line drawn vertically through the left nipple, the person being in an upright position. In persons of a short stature, we find the heart's impulse between the fourth and fifth ribs; and in persons with a long thorax, it may be felt still lower. So also different positions of the body change the place of impulse. In a person lying upon the back, it is observed nearer to the medium line; while lying upon the left side causes it to tilt over more towards the nipple line. This point of impulse we must take as a fixed point for determining the position *of the left ventricle,* which it never fails to represent. The other parts have a constant relation to this.

The *base* of the heart, and consequently the aortic and pulmonary valves, *are almost invariably situated behind the middle of the sternum.*

The *ascending aorta* lies somewhat to the right of the vertebral column, and consequently its sounds and murmurs must always be sought for over the middle and somewhat to the right of the sternum.

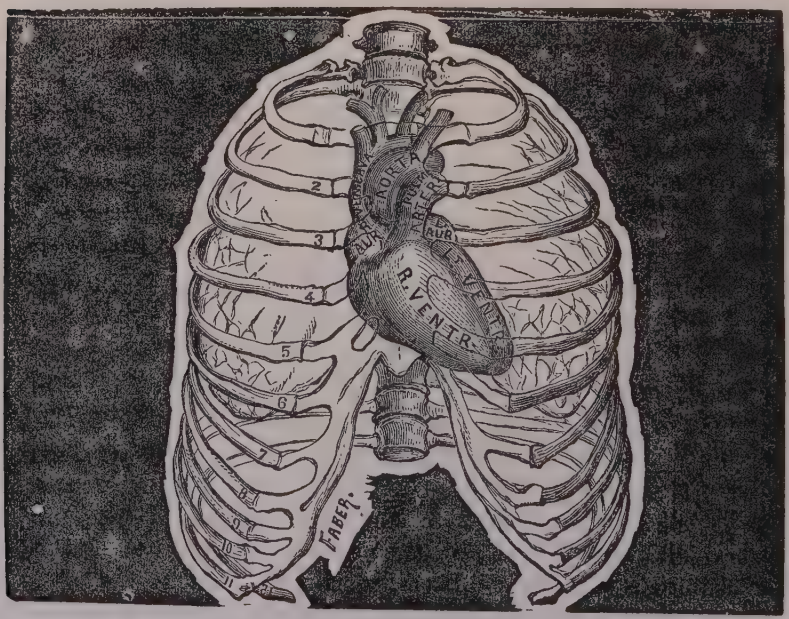
The *mitral valves* are situated nearly one inch below those of the aorta, and on the left side of the sternum.

The *tricuspid valves* are to the right of and anterior to the mitral, and they are for the most part covered by the sternum.

The position of the *right ventricle* is variable, and cannot be determined, unless that of the left ventricle and aorta has been previously ascertained; it lies mostly under the lower part of the sternum.

The valves of the *pulmonary artery* are situated under the cartilage of the third rib to the left of the sternum.

The following diagram shows the exact position of these parts:



Now, if we remember all this, we shall hear those *sounds which originate in the left ventricle, in the mitral valves,* most distinctly *at that part of the thorax against which the apex of the heart strikes; those sounds which originate in the ascending aorta we shall hear best a little to the right of the centre of the sternum, and from thence upwards; those*

sounds which originate in the pulmonary artery we shall hear *best a little to the left of the centre of the sternum; those sounds* which originate *in the tricuspid valves* we shall hear loudest *over the central and lower part of the sternum.*

If we now consider that diseases of the pulmonary valves and the tricuspid valves are of very rare occurrence, we may centre our attention upon only these two points:

1. Upon the sounds of the *mitral valves;* heard best at that part of the thorax against which the apex of the heart strikes; and,

2. Upon the sounds of the *aortal valves;* heard best a little to the right of the centre of the sternum, and thence upwards.

THIRD STEP: OF THE DIFFERENT MORBID SOUNDS OR MURMURS OF THE HEART.

1. *The left chamber during its systole.*

The first sound, heard clearest at the apex, is proof,

1. *That the mitral valves shut perfectly;* not allowing any blood to regurgitate into the auricle; and,

2. *That the aortic valves and orifice offer no obstacle to the direct passage of the blood out of the left ventricle.*

But, suppose the *mitral valves be deficient*, so that they would not shut perfectly during the rush of blood against them, what would be the consequence of this deficiency? Simply, the stream of blood would not be stopped there, but would re-enter the auricle and thus cause a noise, but no tic.

Or, suppose the *aortic valves* be stiffened or roughened, or the aortic opening constricted, so that the stream of blood in its course onward would be interfered with, what would be the consequence of such obstruction? The stream of blood would rub against the obstacle and cause a noise or murmur at the same time when the closure of the mitral valves would give the first tic.

Or, suppose the *mitral valves* be deficient, and, at the same time, the aortic valves stiffened and roughened, or the aortal opening constricted, what would be the consequence of this deficiency and obstruction? Well, the stream of blood would regurgitate through the auriculo-ventricular opening, and also rub against the obstacles in the aortic opening, and thus cause a noise but no tic.

How then can we distinguish between these three different affections? In case of *insufficiency of the mitral valves,* the blood regurgitates at each contraction of the heart into the left auricle; and thus it becomes retarded in the whole lesser circuit. In consequence of which the right ventricle must make stronger efforts to drive it

onward, and the pulmonary artery, becoming largely distended, contracts the more, thus causing a more violent shock backwards against its semilunar valves, and consequently a louder *diastolic sound* of the pulmonary artery. An increase of the second or diastolic sound of the pulmonary artery is, therefore, almost invariably attending an insufficiency of the mitral valves. We must, then, when we hear a noise instead of the systolic sound at the heart's apex, make sure whether there is also an increased second sound of the pulmonary artery. The valves of this artery are situated under the cartilage of the third rib to the left of the sternum—there we put the stethoscope, and if it turns out so, we may be sure that the noise which we hear at the apex, instead of the systolic sound, is caused by an insufficiency of the mitral valves.

In case of constriction of the aortic opening we hear the systolic sound *and a noise besides.* If we put our ear over the aorta, towards the right of the centre of the sternum, we hear the noise there even plainer than at the apex.

In case of *insufficiency of the mitral valves and constriction of the aortic orifice combined,* we shall find these features united: an increased second sound of the pulmonary artery, and an increased noise over the aorta.

2. *The left ventricle during its diastole.*

The *diastolic* or *second sound of the heart*, is proof—1, That the aortic valves shut well, not allowing any blood to regurgitate into the left ventricle; and 2, That the *mitral valves* or the *auriculo-ventricular opening* offer no obstacle to the passage of blood out of the left auricle into the left ventricle.

But, suppose the *aortic valves be insufficient*, so that they would not close tightly after the blood had been driven through them; what would be the consequence of this insufficiency? The contraction of the aorta would drive some of the blood back again into the left ventricle, and cause thus a *noise* or *murmur* instead of the *second sound.*

Or, suppose the *mitral valves be stiffened, roughened, or the auriculo-ventricular opening constricted*, so that the passage of the blood into the ventricle were interfered with, what would be the consequence of such obstruction? The stream of blood would rub against the existing obstacle and cause a noise or murmur during the diastole of the ventricle at the same time when the closure of the aortic valves would give the diastolic sound.

Or, suppose the aortic valves be insufficient, and, at the same time, the *mitral valves or auriculo-ventricular opening obstructed*, what would be the consequence of this insufficiency and obstruction? Surely

the stream of blood would regurgitate through the aortic valves into the left ventricle, and also rub against the obstacles in the mitral valves and auriculo-ventricular opening, and thus cause a noise or murmur, but no diastolic sound.

And how can we distinguish between these different affections? In case of *insufficiency of the aortic valves*, we shall hear a noise or murmur instead of the second sound most distinctly over the aorta ,to the right of the centre of the sternum.

In case of *thickening of the mitral valves, or contraction of the auriculo-ventricular opening*, the blood accumulates in the lesser circuit, produces hypertrophy, with dilatation of the right ventricle, and an increased diastolic sound of the pulmonary artery much more readily than mere deficiency of the mitral valves. The more constricted the mitral orifice is the longer will be the time necessary for the flow of the blood into the ventricle, and the more prolonged and louder the murmur. In cases of this kind the vibrations may even be felt and seen.

In case of insufficiency of the aortic valves and constriction of the mitral orifice combined, we shall, of course, find both features united —a noise instead of the second sound over the aorta and a murmur over the mitral valve, with an increase of the diastolic sound of the pulmonary artery.

3. *The left ventricle during its systole and diastole.*

The clear *systolic* sound indicates that the mitral valves close perfectly, and that the aortic valves are not constricted. The clear *diastolic* sound indicates that the aortic valves shut well, and that the mitral orifice is not constricted. But suppose *the mitral valves be insufficient*, and, at the same time, the *auriculo-ventricular opening* constricted, what would be the consequence of such insufficiency and constriction at the same time? The systole would cause a regurgitation of the blood into the auricle, and the diastole a friction of the blood during its passage through the constricted mitral opening, and thus we would hear a *see-saw*, a noise instead of the first, and a noise accompanying the second sound.

Or, suppose *the aortic valves be insufficient*, and, at the same time, *the aortic orifice constricted*, what will be the consequence of such a state?

Undoubtedly the contraction of the heart would cause a noise by driving the blood through the constricted orifice, and during the dilatation of the heart the blood would regurgitate and cause a mur mur instead of the second sound.

And how are we to distinguish between these two different affections?

When the mitral valves are insufficient, and the auriculo-ventricular opening is at the same time constricted, we must find also an increased second sound of the pulmonary artery. When, however, insufficiency of the aortic valves and constriction exist in the aortic opening, we hear the murmur most distinctly over the aorta.

A comparison of the diagram on circulation, page 205, will help much in elucidating these complicated states.

All that I have here said of the left ventricle and its valves during its systole and diastole is almost verbally applicable to the right ventricle and its valves. As, however, valvular diseases on the right side of the heart are exceedingly rare compared with those of the left side, and even when present on the right side, they almost always exist to a greater extent upon the left than upon the right side—(Hughes)—I think it best to break off here, so that I may not bring confusion upon, instead of elucidation to, this subject; and I shall at once proceed to speak of those *morbid sounds*, resembling murmurs, but which have nothing to do with the valves of the heart.

1. ANÆMIC MURMURS. "They are ordinarily of the softer kind, and resemble the blowing of a pair of bellows, but are sometimes harsh and resemble the rougher morbid sounds, as that of filing or sawing." (Hughes.) They are generally confined to the situation of the aortic or pulmonary valves, or both. They do not follow the course of the large vessels so fully or frequently as do the murmurs arising from disease of the valves. They occur only during the systole of the ventricles; they are not generally heard below the left nipple, as they do not arise from regurgitation through the mitral valve. They are almost always accompanied with a smart, smacking impulse. They generally disappear for a time, while the individual is quiet mentally as well as bodily, if by that quiet the heart assume a natural impulse; and they are always diminished and generally disappear entirely under suitable treatment. Hughes.

The origin of these anæmic murmurs have been attributed: 1, to a watery condition, or a diminution of ordinary viscidity of the blood, in consequence of which the particles of the fluid are more easily agitated and thus give rise to the vibrations which produce the murmur; 2, to the remarkably quick and sudden contraction of the ventricles, in consequence of which the fluid contents of the cavities are propelled quicker through the arterial openings than in health, and

thus give rise to greater friction, which produces the murmur, although no actual constriction exists there. Hughes.

2. VENOUS MURMURS (nun's murmur, top murmur) are heard in many young persons in the anterior triangular space in which the external jugular vein descends. It is a continuous murmur, and is generally more audible on the right than on the left side. This murmur disappears when the current of blood is interrupted by pressure upon the jugular vein, by a deep expiration, or by any position of the body in which the head lies lower than the thorax.

It is heard loudest in an erect position, and during inspiration.

It is thought to be in connection with anæmia, but Skoda says that he has found it also in young and quite healthy individuals.

3. PERICARDIAL MURMURS. As long as the inner surface of the pericardium is in its natural condition, slippery and glistening, the heart moves within it without any sound; just as the two blades of the pleura glide over each other inaudibly, as long as they are in a natural condition. Not so, however, when this slippery and glistening surface becomes roughened in consequence of inflammation and subsequent fibrinous exudation. Then we hear at once a friction sound, which, according to Skoda, may resemble perfectly an endocardial murmur.

How are we then to distinguish between a friction sound caused in the pericardium, and a sound caused within the heart?

Skoda says: "I know no sign by which the friction sounds of the pericardium can be distinguished from the internal murmurs of the heart, excepting this—that the internal murmurs correspond pretty exactly to the rhythm and to the natural sounds of the heart; whilst the pericardial friction sounds seem to *follow* upon the movements of the heart. This distinctive sign is only available when the murmur is somewhat prolonged; if it be of short duration, we cannot determine whether it is endocardial or pericardial." Skoda, p. 253.

To this difficulty still another may be added, viz.: the friction sound may also arise from a roughened condition of that portion of the pleura which covers the unattached parts of the pericardium. The sound is produced by the rubbing of the pleura which covers this free portion of the pericardium, either against the thoracic walls or against the surface of the lungs. Being caused by the action of the heart, it coincides with its movements as completely as though it had been produced within the pericardium. The murmur thus arising external to the pericardium exactly resembles the murmur arising within it, and here we have no means of distinguishing.

The special diseases of the heart I shall arrange under the following heads:

1. Diseases of the pericardium. 2. Diseases of the endocardium and its valves. 3. Diseases of the heart-muscle itself. 4. Nervous diseases of the heart.

I. Diseases of the Pericardium.

Pericarditis, *Inflammation of the Pericardium.*

The internal layer of the pericardium being a serous membrane, like the pleura, its inflammation presents precisely the same anatomical character as that of pleurisy. We find injection, swelling, and exudation of either a serous or sero-fibrinous, or to the most part fibrinous fluid. In this latter case the fibrin is precipitated upon the walls of the pericardium, and forms network-like, villous masses, which have given rise to the name of *cor villosum* or *hirsutum*. During the process of inflammation, sometimes the injected capillaries burst, and thus cause a bloody exudation.

When pus globules form in great abundance the exudation becomes purulent, and, if it undergoes decomposition, it becomes a fetid, discolored, ichorous fluid, as in empyema.

The mere serous exudation is most thoroughly absorbed again, whilst the fibrinous fluid gives rise to adhesions between the heart and the pericardium.

A large quantity of this fluid hinders the heart in its movements and pushes it back from the thoracic walls; at the same time it may compress part of the lung and the large vessels.

It causes also congestion of the lungs, the brain, and the liver, serous exudation into the lower lobes of the lungs, the pleura, and the membranes of the brain and œdema of the lower extremities.

Pericarditis may set in primarily in consequence of external injuries or taking cold; or, secondarily, during the progress of acute rheumatism, which is its most frequent occasion. But it may result also from pleurisy, pneumonia, or ulcerative processes of the ribs, vertebra, œsophagus, stomach, liver, &c.; or it may accompany morbus Brightii, tuberculosis, diseases of the valves, cancer, intermittent fevers, &c. It occurs, too, in typhus, variola, pyæmia, puerperal and exanthematic fevers.

Chronic forms of pericarditis are caused by long-continued mental depressions, abuse of spirituous liquors, violent exertion of the body, and chronic, gouty affections.

Its symptoms, if it is a primary affection, or in combination with acute rheumatism, are—

1. More or less violent fever, sometimes commencing with chills, followed by heat and great acceleration of pulse.

2. As in pleurisy, we must consider the stitch or sharp cutting pain in the region of the heart as a characteristic, subjective sign, which is increased by motion, deep inspiration, and external pressure.

3. Dyspnœa is present in almost all cases; sometimes to such a degree that the patient is incapable of lying down at all.

4. Cough is sometimes wanting, but in most cases we find a short, dry, hacking cough.

5. The position of those patients who can lie down is on their left side or on their back.

Physical Signs.

The first which appears (although seldom during the first two or three days of the disease) is the *friction sound*, which takes place as soon as fibrinous deposits are formed within the pericardium. These roughen its smooth surface, which rub together in consequence of the motion of the heart and the respiratory motion of the thoracic walls. This friction sound is scarcely ever synchronous with the sounds of the heart, but is either in advance of them or follows them.

Inspection shows in young persons a swelling or bulging out of the precordial region in advanced cases, with a large quantity of exudation. In older persons, where the cartilages of the ribs have become ossified, such enlargement cannot take place.

Palpation discovers in the beginning of the disease a stronger impulse of the heart at its normal place; but later this impulse becomes weaker and finally ceases altogether, when the collection of fluid pushes the heart back from off the thoracic walls.

When there is a loud friction sound, this becomes noticeable also to the sense of touch, and feels like the purring of a cat.

Percussion at first reveals nothing. There must be already a considerable quantity of fluid exudation before we perceive the natural dull percussion sound of the heart spread in a larger circumference; and if the lung happens to be in a position that it covers the filled pericardium, we cannot get a dull sound in spite of even a very large quantity of fluid.

At first the exudation is confined to the base of the heart and the origin of the arteries. Here then we have at first to look for an increase of dulness of the percussion sound. Later, the dull percussion sound may increase in the long diameter, down the heart; and if

the effusion is very considerable, also in its transverse diameter, so that if, according to Skoda, the pericardium contain as much as two pounds of fluid, the percussion sound becomes completely dull from the second left costal cartilage to the lower border of the thorax, and from the right edge of the sternum to the middle of the left lateral region.

Secondary pericarditis of course develops itself differently. It being a mere additional symptom or consequence of, or complication with, some other disease, its first onset is hidden by the symptoms of that disease. But, when once developed, its presence must of necessity be indicated by the same physical signs which I have detailed above.

Uncomplicated pericarditis is, of course, much more easily cured than when complicated. In the latter case our prognosis has to be based altogether upon the nature of that complaint with which it is combined.

Therapeutic Hints.

Acon., chill at the commencement, followed by fever-heat; stitching pain in the region of the heart; impossibility to lie on the right side; great restlessness; frequent sighing and taking a deep breath; feeling of fulness in the chest, dyspnœa; fainting.

Arsen., in consequence of suppressed measles or scarlet fever; inexpressible anguish and restlessness; worse at night; the patient finds no ease in any position; flushed face; paralytic feeling in the upper extremities; tingling in the fingers; cold perspiration.

Bryon., stitching pain in the region of the heart, preventing motion and even breathing; wants to lie perfectly quiet.

Cactus grand., sensation of constriction in the heart, as if an iron hand prevented its normal movement; acute pains and stitches in the heart; difficulty of breathing; attacks of suffocation, with fainting; cold perspiration in the face, and loss of pulse; palpitation when walking, and at night when lying on the left side.

Digitalis, copious serous exudation, rheumatism; irregular, intermitting pulse; brick-dust sediment in the urine.

Iodine, in complication with croupous pneumonia; purring feeling in the region of the heart; violent palpitation, increased from the slightest motion, better while lying perfectly quiet on the back; fainting spells.

Kali c., stitching pain in the region of the heart; swelling between the eyebrows and the upper lids, like little bugs; jerking up of the limbs,

much frightened when having the feet touched; every thing worse about three o'clock in the morning.

Lachesis, restless and trembling; hasty talking; great oppression; anguish about the heart in rheumatism; irregularity in the beats of the heart.

Psorin., psoric nature; better while lying quietly.

Puls., the patient weeps easily; is thirstless; often changes position; has a loose, rattling cough, worse on first going to bed; rheumatic pains, which quickly change locality; inclination to looseness of the bowels; suppressed menstruation.

Rumex, during rheumatism; burning, stinging pain in the left side of the chest near the heart when taking a deep inspiration, when lying down in bed at night.

Spigelia, when, notwithstanding the use of Aconite, the fever continues and the rubbing sound commences; stitching pain in the chest from the very slightest motion.

Sulphur, palpitation after going up stairs, with shortness of breath; steady pain in the left side through to the shoulders; red lips; sleeplessness; after suppressed itch.

Tart. em., in complication with pleuro-pneumonia.

Veratr. vir., faintness after rising from a recumbent position; syncope when walking; relieved only by lying down.

Hydropericardium, *Dropsy of the Pericardium.*

The pathological character of this disease consists of a collection of *serum without fibrin.* A fibrinous exudation never takes place without an inflammatory process. The serum is a yellowish, clear fluid; sometimes, if mixed with blood, it is brownish or reddish, and of alkaline reaction. A small quantity of such fluid is found in all post-mortem examinations. To constitute dropsy of the pericardium, this sac must contain at least several ounces of serum, and it amounts in some cases even to over one pound. When such is the case, the pericardium is distended, is of a dull whitish color, without lustre; the fat upon the heart is gone, and the cellular tissue appears œdematous; the lung becomes compressed and the thorax enlarged.

Dropsy of the pericardium is generally the consequence of a hydræmic condition of the blood, or of diseases which cause dropsical affections also in other parts, such as chronic affections of the spleen, morbus Brightii, cancer, anæmia, dilatation of the right ventricle, &c. It is also found in consequence of conditions which prevent the necessary

oxygenation and free circulation of the blood, as in emphysema, in cirrhosed lungs, in defects of the valves of the heart; also in atrophy of the heart, as likewise in atrophy of the lungs after chronic pleurisy or pneumonia.

Hydropericardium is, therefore, altogether a disease of secondary nature, and its symptoms do not become very prominent, unless a very considerable quantity of fluid collects within the pericardium. Then we observe great *dyspnœa*, which prevents the patients from lying down; any effort to do so at once causes an attack of suffocation; they have to sit up day and night with their bodies bent forwards. The jugular veins swell and dropsical affections appear also on other parts of the body; first in the lower extremities; then in the genitals; later, within the peritoneum and the pleuræ; finally, the dropsical swelling invades the whole body, and the impeded respiration and circulation cause stupor and death.

The physical signs are: no friction sound; distension of the precordial region in young subjects; impulse of the heart either absent or weak; weak sounds of the heart; and dull percussion sound in a wider circumference than the heart alone would give rise to.

Therapeutic Hints.—Compare Hydrothorax.

II. Diseases of the Endocardium.

Endocarditis, *Inflammation of the Endocardium.*

When anatomically examined, this affection exhibits the lining membrane of the heart reddened, injected, swollen and covered with fine fringes, which gradually change into papillæ and wart-like excrescences, which consist of the softened lining membrane. In consequence of this softening of the membrane, it is of frequent occurrence that the chordæ tendineæ, or the valves themselves, are torn. In rare cases, when the endocardium is torn at a place where it covers the heart muscle, it causes the blood to rush into it, and to distend and soften the heart muscle itself, constituting in this way what is termed *an acute aneurisma of the heart.*

Other consequences of such inflammation are: adhesion of the chordæ tendineæ and points of the valves, either between themselves or with the walls of the heart; extension of the inflammation to the heart muscle or myocarditis; coagulations of fibrinous exudation which cover the papillæ, and wart-like excrescences about the valves, and which are often driven into the arteries by the stream of blood.

Such pieces or lumps of coagulated fibrin are called *emboli*, and they may become the cause of hemorrhagic infarcts or abscesses, apoplectic clots, or, if they obstruct the larger vessels of the lower extremities, they may cause gangrene of the toes.

Endocarditis is almost always a secondary affection; primarily (in consequence of taking cold, or from traumatic causes) it is of very rare occurrence. Generally it is found in the left ventricle in consequence of metastasis during acute rheumatism of the joints, especially when a great many joints are attacked or where the disease jumps from one joint into another. It is also found associated with pericarditis, myocarditis, and the acute form of morbus Brightii, after scarlet fever; it also has been observed in the course of puerperal fever, typhus, and measles.

Its invasion, during these different affections, generally takes place unnoticed; because it is quite seldom that the patient complains of pain in the region of the heart when attacked in this way. But once established, we observe the following symptoms:

1. *Palpitation of the heart,* and soft, easily compressible, and small pulse.

2. *Dyspnœa*, which is the greater the more the respiratory organs become involved in the morbid process, causing quick and unequal respiration, fainting, or congestion of the brain, with headache, delirium, sleeplessness, sopor.

3. Higher degrees of endocarditis are frequently attended by icterus.

Its physical signs are the following:

1. The normal sounds of the heart are stronger, and audible over a larger space than natural—in the beginning of the disease,

2. In place of the first tick we hear, at the apex of the heart, a *noise*, which shows that the mitral valves have become diseased; and,

3. The *second tick of the pulmonary artery is increased* in consequence of the insufficiency of the mitral valves, causing an overflow in that artery.

4. Percussion at first reveals nothing, but at a later period yields a dull sound over a greater space than natural, because of the dilatation of the right ventricle in consequence of impeded circulation.

Endocarditis may pass over into a perfectly healthy state; but it generally leaves diseases of the valves; either thickening, adhesion, or perforation of them; and in consequence of this, dilatation and hypertrophy of the heart.

Therapeutic Hints.

Compare what has been said under Pericarditis. The characteristics of the remedies acting upon the heart must be applied here too. In addition, I shall mention only—

Spigelia, the most important; waving palpitation, not synchronous with the pulse; pulsating and trembling carotids; purring feel over the heart; rheumatism.

Aurum, rheumatic pains, previously wandering from joint to joint, become fixed in the region of the heart and cause great anxiety; the patient has to sit perfectly quiet in an upright position; palpitation, with irregular, intermitting pulse and short breath, feeling as though the heart ceased beating for a while, and then at once one hard thump is felt.

Bismuthum has not yet been tested in practice, but its pathological effects seem strongly to indicate it; they are inflamed spots in the endocardium, black coagulum in the heart.

Iodine, according to Kafka, if Spigelia has failed to act favorably during 24–36 hours.

Kali carb., where, in place of the first tick, a blowing noise and a louder second tick of the pulmonary artery is heard, (Kafka;) where there consequently exists already a stagnation in the pulmonary circulation.

In consequence of *Endocarditis* originate diseases of the valves, which consist either in—

1. *Insufficiency* of the valves; or in—
2. *Constriction* of the valvular openings.

I. Insufficiency of the Mitral or Bicuspid Valve.

In consequence of this deficiency the blood regurgitates during the systole into the left auricle, thus checking the normal flow of the blood through the pulmonary vein. This causes an accumulation of blood in the lungs, in consequence of which the blood is pressed backwards into the pulmonary artery, causing here a widening of its volume, and, in consequence, a louder second tick. This increased second tick of the pulmonary artery is the most characteristic sign of insufficiency of the mitral valves.

The check of circulation in the lungs causes further dilatation and hypertrophy of the right ventricle, because it requires greater power to force on the accumulated and obstructed blood. By-and-by, however, this increase of power in the right ventricle diminishes again,

and thus the veins of the lungs become permanently overcharged with blood; the same result takes place in the venæ cavæ, and, in consequence, the liver, spleen, and kidneys grow hyperæmic, which finally end in dropsy. This stagnation of blood in the lungs causes also dyspnœa, bronchial catarrhs, periodical hemorrhages from the lungs, passive hyperæmia of the brain, an undulation of the jugular veins, cyanosis.

The characteristic physical signs are the following:

1. In place of the systolic sound we hear a noise at the point where the apex strikes at the thoracic wall.

2. The diastolic of the pulmonary artery is much increased.

3. The dull percussion sound of the heart extends further in breadth, on account of the dilatation of the right ventricle.

2. Constriction of the left Auriculo-Ventricular Opening.

As in this case the narrowed and roughened orifice does not allow the blood to enter freely into the left ventricle, its passage through this opening is also perceptible to the ear, and thus we hear during the diastole a noise at the apex of heart. At the same time the narrowed opening prevents the normal quantity of blood from passing through into the left ventricle, which causes an accumulation of blood in the left auricle; hence, a check of flow in the pulmonary vein; hence, an overfilling of the lungs; hence, a greater backward pressure into the pulmonary artery; and thus all the necessary consequences which I have detailed under the head of defective mitral valves, only much more rapid and much more intense.

In addition it causes the left ventricle to grow smaller and the aorta to grow narrower, on account of the deficient quantity of blood which enters into them.

Its characteristic physical signs are the following:

1. We hear at heart's apex instead of the diastolic sound a noise. This noise is sometimes similar to the purring of a cat, so that it even may be felt;

2. The diastolic sound of the pulmonary artery is louder; and

3. The dull percussion sound of the heart extends further to the right, on account of dilatation and hypertrophy of the right ventricle.

In cases where the mitral valve is defective and the left auriculo-ventricular opening constricted at the same time, then we hear a noise during the systole as well as during the diastole. The sound of the aorta is mostly weak. The pulse is in most cases weak, not corresponding to the violent palpitation of the heart.

3. Defective Aortic Valves.

As soon as these valves do not shut tight, the blood which has been driven during the heart's systole into the aorta, rushes, during its diastole, back into the left ventricle, causing an abnormal quantity of blood to collect there. To get rid of this the left ventricle has to make greater efforts to rid itself of it; and, in this way, it gradually grows wider and thicker—*eccentric hypertrophy of the left ventricle.* By this increased capacity of the left ventricle the consequences of the defective aortic valves become, so to speak, counterbalanced. For a good while it prevents an overfilling with blood in the pulmonary veins; we observe no slowness of pulse, no decrease of arterial blood, no cyanosis or dropsy. For, although the defective valves retard the circulation and make the blood venous, the hypertrophy of the left ventricle hastens the circulation and makes the blood arterial again.

Therefore, we find that patients thus affected suffer comparatively little; the most frequent signs are, congestion of the brain, which manifests itself as dizziness, noise in the ears, flickering before the eyes, headache, hallucinations, red face, &c.

Later, however, the increased capacity of the left ventricle is not sufficient longer to overcome the consequences of the defective valves, and thus all the symptoms of impeded circulation, as described above, commence to set in. The characteristic physical signs of defective aortic valves are the following:

1. Diastolic noise of the aorta, in consequence of the regurgitation of blood into the left ventricle during the heart's diastole;
2. Greater extension of the dull percussion sound in the heart's long axis, on account of the hypertrophy of the left ventricle;
3. Arched appearance of the region of the heart for the same reason;
4. The impulse of the heart's apex is felt lower down and outside of the nipple line;
5. Strong, jumping pulsation of the carotid arteries; and,
6. Short, jerking, wiry pulse.

4. Constriction of the Aortic Opening.

The disturbance of circulation is, in such a case, of course, still greater than by mere defect of the valves; and, therefore, the patient soon shows symptoms of deficient circulation; such as paleness, small, thread-like pulse; fits of fainting; coolness of the extremities; anæmia of the brain. At a later period the veins become overcharged with

blood, and in consequence we find the patient suffer with dyspnœa, cyanosis, and all the other symptoms of heart disease.

Its characteristic physical symptoms are:

1. Systolic noise, which is often heard in the carotid.

2. Dull percussion sound, somewhat extended in the direction of the longitudinal axis of the heart. In consequence, dilatation and hypertrophy of the left ventricle

3. Apex lower down and outside of the nipple line.

4. Pulse small, wiry, irregular and thread-like.

In case there also exists at the same time a defect in the aortic valves, we may also hear a diastolic noise.

5. Defective Tricuspid Valves.

This defect allows the blood to regurgitate into the right auricle, when the heart contracts. Thence the retrograde stream of blood goes into the venæ cavæ and the jugular veins; hence we feel a pulsation of the jugular vein, synchronous with the arterial pulse. This retrograde motion of the blood causes over-filling of all the veins, and its consequent results, hyperæmia, cyanosis, hydrops, &c.

Its characteristic physical signs are:

1. *Systolic noise in the right ventricle.*

2. *Swelling and pulsation of the jugular veins.*

3. *More extended dull percussion sound* in the direction of the breadth of the heart on account of its right auricle having become enlarged and hypertrophied.

This complaint is generally a secondary affection, in consequence of diseases of other valves; and then, of course, it is attended by all the above-mentioned disturbances and signs.

The constriction of the right auriculo-ventricular opening, the defect of the valves of the pulmonary artery, and the constriction of the pulmonary opening, are of such rare occurrence, that even Skoda did not observe them on the living. Skoda, p. 371.

The *treatment* of all these different valvular affections has to be adapted to each single case, and it is not the diseased valve which points out a particular remedy, but the individual symptoms by which the whole morbid process manifests itself.

Still I might give some general dietetic rules, which are of great importance for the treatment of these different affections.

Patients in whom we find symptoms of congestion of the brain or chest, ought not to eat much animal food; must avoid all sorts of stimulants, and especially coffee, and all kinds of spices. Mental ex-

citements and depressions are alike hurtful to them; and neither a too high nor a too low degree of temperature is advisable.

Patients, however, in whom anæmia and debility prevail, ought to eat animal food and drink beer or wine; ought not to over-exert themselves, and ought to have all the fresh, pure air they can get.

Amongst the most important remedies used in such complaints, I find Ars., Calc. c., Digit., Ferrum, Iodine, Kali c., Lach., Natr. m., Phos., Plumb., Puls., Sepia, Spongia, Sulph.

Therapeutic Hints.

Calc. c., trembling pulsation of the heart, worse after eating, at night with anguish; menses too early and too profuse.

Ferr., chlorotic symptoms; congestion of the head; spitting of blood; palpitation, better from slowly moving about.

Kali hydroj., darts in the region of the heart when walking; after mercurial poisoning; after repeated attacks of inflammation of the heart.

Natr. mur., irregularly intermitting pulsation; fluttering of the heart with weak, faint feeling, necessity to lie down; coldness of hands and feet; numbness of the hands, better from rubbing; cutting pain in urethra *after* micturition; menses scanty

Phosph., congestions of the lungs; tightness across the chest and tight cough; spitting of blood, palpitation worse after eating, or any mental emotion; yellow spots on the chest; painless diarrhœa.

Rhus t., palpitation worse during rest; pain from the region of the heart into the left arm, with numbness; rheumatism.

Spongia, violent palpitation, awakens after midnight with a sense of suffocation; loud cough, great alarm, agitation, anxiety and difficult respiration; violent gasping respiration; pain in the heart.

III. Diseases of the Heart-muscle.

Myocarditis, Carditis, *Inflammation of the Heart-muscle,*

Is found always in connection with peri or endocarditis; and then, its seat is generally the left ventricle. The substance of the muscle appears yellowish; sometimes fatty degenerated. Its most frequent occasion is acute rheumatism of the joints, but it has also been observed in the course of puerperal and exanthematic fevers.

There are no characteristic signs of this complaint, because it is almost always mixed up with peri or endocarditis. Mild forms pass over without any consequences; but if it extends to the form-

ation of abscesses, it may cause widening of the heart-muscle, (partial aneurism,) or bursting of the heart-muscle, and consequent sudden death. When the abscess discharges into the ventricle, it causes the formation of emboli, with their consequences.

Hypertrophy and Dilatation of the Heart.

Hypertrophy consists in an increase of mass of the muscle of the heart, or a thickening of its walls, whereby the inner cavity becomes narrower: this is the so-called *concentric hypertrophy;* or the heart-muscle is increased in thickness, and the inner cavity widened at the same time: this is the so-called *eccentric hypertrophy.*

When, however, the inner cavity is widened, and the heart-muscle at the same time has grown thinner, then it is called *dilatation of the heart.*

The most frequent of these three forms of altered conditions of the heart-muscle is the eccentric hypertrophy.

But it is not always the whole heart that is enlarged or dilated; it is generally only one-half of it that is thus affected. A hypertrophied left ventricle makes the heart longer, reaching further down in the left thorax, whilst an eccentric hypertrophy of the right ventricle makes the heart broader, so that it reaches further over into the right thorax.

Both hypertrophy and dilatation have, as their most frequent cause, a disturbed circulation, in consequence either of diseases of the valves or diseases of the arteries, like aneurism, or in obstacles in the capillaries in the lungs. Also pericarditis and myocarditis, mental excitements, strong coffee, tea, and spirituous liquors have been found exciting causes of this complaint.

Total hypertrophy shows, on percussion, *dulness* of sound, increased in all directions; the impulse of the heart much increased, shaking the whole thorax.

The apex strikes much lower and towards the left of the nipple-line. *Hypertrophy and dilatation* of the left ventricle gives nearly the same results. The difference between it and the total hypertrophy is, that the dull percussion sound does not extend so far towards the right thorax.

In *hypertrophy and dilatation* of the right ventricle, we find the dull percussion sound further towards the right side.

The impulse is not so strong and not so shaking, and the apex strikes towards the lower part of the sternum, and over to the right side. The jugular veins swell and undulate, and very soon associate with it cyanosis, dropsy, and affections of the lungs, (blood-spitting.)

Therapeutic Hints.—Compare what has been said of the different affections of the heart. As hypertrophy is more or less a consequence of the one or the other, the characteristic indications of the different remedies there described must also fit here. I have only to add:

Plumb. ac., stitch in the region of the heart during an inspiration, with anxiety; heat and redness of the face; rushing of blood in the region of the heart during a rapid walk; anguish about the heart, with cold sweat; palpitation of the heart.

Post-mortem, after poisoning, has shown that the serous coat of the pericardium is lined with a layer of reddish-gray, fine villous, meshy, firm, exuded lymph. The heart is more than double its natural size. The wall of the left ventricle is more than an inch thick.

Kalmia lat., after rheumatism.

Fatty Degeneration of the Heart.

This consists either in a *deposition of fat all around the heart-muscle*, or in deposits of fat corpuscles between the primitive fibres of the muscle. In the latter case the muscle has a pale-yellowish color, and its substance is easily torn.

It is generally found in persons in whom all the nourishment seems to be converted into fat; likewise in consequence of general disturbance of nutrition, as in old people; in tuberculosis, cancer, Bright's disease; and, finally, it has been observed as the results of hypertrophy and diseases of the valves, and of myocarditis.

Symptoms.

Contrary to hypertrophy, the more marked the fatty degeneration of the heart becomes, the weaker becomes the impulse of the heart, and the softer and smaller the pulse.

In its later course we observe cyanotic and dropsical symptoms; and death may suddenly occur in consequence of rupture or paralysis of the heart, or in consequence of disturbed circulation through the brain, in the form of apoplexy.

These symptoms offer no therapeutic indications. Persons inclined to growing fat ought not to drink malt liquors: ought to exercise much in the open air. Wine and water would be much better adapted to them.

IV. Nervous Affections of the Heart.

Nervous Palpitation of the Heart.

This affection occurs in spells, and is generally more distinctly felt by the patients themselves than by the examining hand of the physician. When, during the attack, the patient's face is red, then the pulse is generally full and large; whilst, when the patient looks pale, the pulse is small and intermittent. We often find it accompanied with dizziness; roaring noises in the head; headache; flickering before the eyes; trembling; fainting fits; and pressure and choking sensation in the throat; the patients complain of a sensation as though the heart were jumping up into the throat.

Its causes are various. It is found most frequently in anæmic and chlorotic individuals; also in women during their climacteric period; in hysteric women, and in diseases of the womb; during the time of puberty; after sexual excesses. Spinal irritations may also cause it; and we find it in children who grow very fast, or whose intestines are irritated by worms. Very often it is brought on by mental emotions; and sometimes we do not know any cause whatever.

The physical examination during a spell often discovers abnormal noises in the heart, which might easily give rise to diagnostical errors. The heart must then be examined at some other time; and if we then hear the normal sounds, we may be pretty sure that we have to deal with nervous palpitation.

Therapeutic Hints.

Acon., in young subjects; after fright; after wine.

Arsen., after suppressed herpes circinatus and suppressed perspiration of the feet.

Asa fœt., in women, after suppressed discharges or bodily exertions, with small pulse; breathing not oppressed.

Bell., with congestion of the head.

Calc. c., after suppressed eruptions and pimples on the face; onanism.

Camph., when attended with coldness of the skin; cold extremities; pale face; and sudden oppression of breathing.

China, great weakness from loss of vital fluids; long-continued nursing.

Cocc., tremulous palpitation from quick motion and mental excitement, with dizziness and faintness.

Coffea, after excessive exaltation.

Ferr., anæmia; throbbing in all the blood-vessels; soft bellows-sound at the apex.

Graph., amenorrhœa; pimples on the face about the menstrual period.

Moschus, when combined with hysterical symptoms.

Nux v., after coffee, wine, liquors, spices.

Natr. mur., fluttering, long-standing chlorosis, with torpid skin and suppressed menses.

Nitr. ac., when caused by the slightest mental excitement.

Opium, after alarming events, causing fright, grief, sorrow, &c.

Phos., dyspnœa, tightness across the chest, great weakness, and after any little mental excitement.

Phos. ac., in children and young persons who grow too fast; after self-abuse; long grieving.

Puls., young girls during the time of puberty; from suppressed menses.

Rhus. t., always worse when being quiet.

Secale, with profuse menstruation of a watery discharge.

Sepia, tremulous, intermitting pulsation; suppressed menstruation.

Thea, after exciting talking and mental exertions, with sleeplessness.

Angina Pectoris.

Without any premonitory signs the patient feels a pressing, aching pain in the middle of the sternum which takes his breath away, and obliges him to keep perfectly still. Gradually increasing in violence the pain spreads, in most cases, from the middle of the sternum towards the left plexus-brachialis, and thence down into the hands and fingers, seldom spreading over to the right side and arm. This pain is attended with the greatest agony and dyspnœa; the patient's face looks pale and collapsed; the front part of his head covers with cold perspiration, and his limbs grow cold. He groans and moans, and perhaps in a few minutes the attack is over, sometimes lasting, however, from a quarter to half an hour, generally ending with eructations of wind.

During the paroxysm the action of the heart is increased, whilst, in some cases, it is found to be weaker. Consciousness is never lost. Such spells are rare in the commencement of the disease, but they gradually grow more frequent, so that in bad cases they occur daily.

After an attack the patient feels weak, and the aching in the chest and the left arm leaves behind for some time a feeling of numbness. Such spells are brought on from walking, bodily exertions, and mental excitements. Sometimes they occur during the time of going to sleep, and even during sleep. But at the bottom of it all lies some organic affection of the heart of various nature, as aneurism of the aorta, fatty degenerations of the heart, and ossification of the coronoid arteries.

Its presence, therefore, affords no conclusion as to the nature of the heart disease. Subjects of this disease are generally men—persons who are inclined to grow fat, and old people.

During the attack, Kali. c.? Ars.? Lach.?

The patient ought to be under treatment for his chronic affection of the heart.

V. Diseases of the Aorta.

Aneurism of the Thoracic Aorta.

Aneurism means a distension of a short piece of an artery forming a kind of sac at that place. Such distensions are more frequently found in the aorta ascendens than in the aorta descendens. It can be diagnosticated only when it reaches the exterior thoracic wall. In such a case it renders that part of the chest perfectly dull on percussion and more resisting to the touch. Also, we often observe on that part a pulsating swelling with a peculiar kind of purring in it, which extends up into the carotid arteries. We find this swelling on the right side of the sternum, between the second and third rib, if the aneurism is an enlargement of the convex part of the aorta. It makes its appearance, however, on the left side of the sternum in the same intercostal space when the aneurism has formed on the concave part of the aorta. Its symptoms are: palpitation of the heart, dyspnœa, asthma, bronchial catarrh, hæmoptoë, swelling of the jugular veins, with cyanosis, œdema of the upper extremities, difficulty in swallowing, hyperæmia of the brain—all symptoms in consequence of its pressure either upon the lungs or the œsophagus, and in consequence of disturbed circulation.

The aneurism of the *arch of the aorta* has its seat behind the manubrium sterni, and a deep pressure with the finger into the fossa jugularis may detect its pulsation and purring.

The aneurism of the *aorta descendens* must be very large in order to cause a duller sound on percussion, or a swelling between the left

shoulder-blade and the spine. Its symptoms are the same as those of aneurism of the ascending aorta; and, in addition, it may cause paralysis of the lower extremities, rectum, and bladder.

To finish the morbid affections of the thoracic organs I have yet to speak of *the affections of the diaphragm*, that muscle which forms the partition between the thoracic and abdominal cavity, and which participates greatly in the acts of respiration.

1. Diaphragmitis, *or Inflammation of the Diaphragm.*

The substance of the diaphragm being a muscular, tendinous tissue, is scarcely ever primarily affected; whilst its serous lining on its upper surface, a continuation of the pleura and pericardium, and on its lower surface a continuation of the peritoneum, frequently participates either in inflammations of the pleura, or of the pericardium, or of the peritoneum. Symptoms, like impossibility of taking a deep breath, hiccough, yawning, risus sardonicus, pain in the shoulders, vomiting of green masses, great difficulty in swallowing, even hydrophobia, denote in pleuritis, pericarditis, or peritonitis, an extension of the inflammatory process upon the diaphragm.

Physical signs are none.

Therapeutic Hints.

Acon., hard, feverish pulse; thirst; anxious impatience; restless tossing about; painful cough; difficulty in breathing, and pain and heat in the upper region of the abdomen.

Bryon., stitching pain in the region of the diaphragm, worse from any motion, from coughing; white, dry tongue without thirst, or else great thirst with drinking large quantities of water.

Cham., throbbing, burning pain in the region of the short ribs and pit of the stomach, worse from pressure; short and anxious breathing; short, dry cough; vomiting; belching; great restlessness; tossing about; loud complaining, &c.

Lycop., sense of constriction from the right side all around the short ribs; cannot stretch himself nor lie upon the back; neither stand upright.

Rhus t., worse when lying still; or disposition to move notwithstanding the pain caused by it; commencing on the left side and going to the right.

Compare Pleuritis and Peritonitis.

2. Singultus, *Hiccough.*

Hiccough consists in a spasmodic contraction of the diaphragm, by which the air is suddenly drawn in, causing that sound peculiar to hiccough. Its causes may be of a cerebral origin, as in diseases of the brain; in consequence of anæmia; long-standing, weakening diseases after great loss of blood and vital fluids; after strong mental affections, like fright, anger, &c.

Or, it may be a mere reflex from diseases of the pleura or pericardium; or it may accompany different affections of the stomach, the liver, the intestinal canal. If it takes place in consequence of exhausting diseases, like morbus Brightii, tuberculosis, typhus, cholera, pleurisy, with abundant exudation, large abscesses, &c., it is always a dangerous symptom, continues for days and may be the forerunner of a fatal issue. According to the different causes many remedies may be indicated.

3. Rupture and Perforation of the Diaphragm.

Ruptures are caused by violent concussions or heavy lifting; whilst perforations are the result of suppurating processes either in the thoracic or abdominal cavity. When ruptures take place from out of the thorax they are generally attended by dyspnœa, cough, hiccough, suffocating spells, and fainting. When from out of the abdomen, vomiting, colic, obstinate constipation.

Perforation takes place from suppurating processes in the thoracic cavity; for example, in consequence of pyothorax; when the fluid discharges into the abdominal cavity it causes peritonitis.

ABDOMEN.

When we examine the abdomen by *sight* or *inspection* we have to take into consideration the following conditions:

1. *Its appearance in regard to size.*

a. *Enlargement of the abdomen* may be partial or general.

Partial enlargement depends upon abnormal sizes of the abdominal viscera; either the stomach, liver, spleen, uterus, ovaries, kidneys, glandular structures, bladder, and so on. Also, upon pathological products, as tumors of all kinds, encysted exudation, extra-uterine pregnancy, hernia, and so on.

General enlargement may arise from œdematous infiltration of the abdominal walls; or from accumulation of fat in the subcutaneous cellular tissue, and the omentum; from an accumulation of gas in the stomach and intestines; from a collection of gas or fluid in the peritoneal sac; from large tumors, which fill the whole abdominal cavity; from pregnancy, and sometimes in consequence of frequent pregnancies, the so-called pot belliedness, and likewise in scrofulous children from enlarged mesenteric glands.

b. The abdomen *appears smaller*—sunken in—sometimes to such a degree that the spinal vertebra may even be felt through the abdominal walls. This we observe in persons who have been starving for a considerable time; also in cases of general marasmus; in strictures of the œsophagus, the cardia, the pylorus, or the duodenum; after severe and long-continued diarrhœa and cholera; it is also a sign of painter's colic from poisoning with lead, and quite characteristic in brain diseases, especially tubercular meningitis.

2. *Its appearance in regard to motion.*

a. Respiratory motion. The diaphragm, moving up and down, makes, as we know, the abdomen participate in the respiratory motions of the chest.

This respiratory motion of the abdomen *is increased* in such affections of the chest as prevent a normal extension of the thorax, as pneumonia, pleurisy, &c.

It is *decreased*, or *ceases altogether*, in inflammation of the peritoneum, in large effusions of fluids or gas in the abdominal cavity, in consequence of large tumors which fill the abdomen, and also from injuries of the diaphragm.

b. Pulsation. We observe it generally in the pit of the stomach, sometimes lower down, nearly to the umbilical region; rarely below the navel, and almost always in the medium line.

This palpitation may have different causes:

1. *Abnormal position of the heart,* its apex lying towards the pit of the stomach. In this case we hear, on auscultation, both ticks of the heart, or noises, if there are any, in the pit of the stomach, and not at the normal place below the nipple.

2. It is caused *by the right ventricle,* which communicates its motion to the left lobe of the liver. In this case we hear also, on auscultation, both ticks of the heart at the pit of the stomach, and at the same time at the normal place.

3. It is caused *by the descending aorta*, and the pulsation extends then further down towards the navel. In this case we hear, on aus-

cultation, only one sound, or one noise, if there be any; which, however, appears a little later than the impulse of the heart at its normal place.

The causes of this abdominal pulsation may be—

a. Relaxed and thin abdominal walls; collapsed state of the abdomen.

b. A curvature of the spine forwards, whereby the aorta comes nearer to the abdominal walls.

c. A thickened left lobe of the liver.

d. Increased impulse of the heart, as in hysteric individuals; or hypertrophy of the left ventricle in consequence of insufficiency of the aortic valves.

3. Its appearance *in regard to the elasticity of its external walls:* we find it *greatly relaxed, hanging down like a loose sack,* in old women, or in those who have given birth to many children; also after absorption of large quantities of fluids, by which the abdominal parietes had been largely distended.

A similar effect is produced by a large accumulation of fat within the subcutaneous cellular tissue.

Large distention of the abdomen, especially pregnancies, sometimes causes the straight muscles of the abdomen (*the m. recti*) to be driven asunder, so that a space of several inches occurs between them, which is very thin, consisting merely of the fasciæ of the oblique muscles, the peritoneum, and the external covering; whilst the recti muscles lie on the sides of the abdomen, forming there a pad-like protruberance. The thin, yielding space in the middle between them, however, bulges out as soon as the person assumes a standing position, not being strong enough to keep the abdominal viscera in their normal position.

4. Its appearance *in regard to the development of its subcutaneous veins.* We observe these veins *largely* distended whenever there exists an obstacle to the free circulation of the blood through the vena cava inferior. This may be caused by stricture or obliteration of the vein itself, or by pressure of enlarged abdominal organs, or abdominal tumors upon it. Some of the blood which cannot pass there is brought by way of the venæ intercostales, mammariæ or axillares, from the lower portion of the body into the superior vena cava.

The so-called *Caput Medusæ*, which is a network of enlarged veins around the navel, arises from the umbilical vein, which has not become obliterated.

5. *Its appearance in regard to changes of color.* Here I have to mention the straight line which we observe in pregnant women, extending

from the navel to the symphisis pubis, either pale yellowish, brownish or even blackish. This line has been observed quite exceptionally, however, in men, children and also such women as never had been pregnant. We sometimes observe, also, whitish or bluish-white stripes like cicatrices on the sides of the abdomen, which are generally signs of previous pregnancy, as other distentions of the abdomen rarely cause them.

On further examination of the abdomen by means of *palpation,* we may learn, 1, the *seat* of the affection.

a. If in the abdominal walls, we are able to raise the affected part during a relaxed state of the abdomen; or, if the abdominal walls be put upon the stretch, we shall observe the swelling in it becoming more prominent.

b. If the seat of the affection is in one of the abdominal organs, the swelling feels deeper and cannot be raised by lifting the relaxed abdominal walls. In order to decide which organ is affected, we, of course, must be entirely clear in regard to the normal positions of these different organs.

Palpation teaches further the *nature of the swollen parts in the abdomen.*

A *solid* swelling we feel as such, whilst a *fluid exudation* gives to the examining hand the sense of *fluctuation;* provided the sac which contains it be not too much distended, in which case it feels as solid and hard as a stone, and without any fluctuation.

Palpation is also important to become certain of the character of pain which the patient experiences on pressure.

If the pain is increased by slight pressure and ameliorated by gradual deeper and deeper pressure, the affection is mostly of a nervous nature. When, however, the pain increases as the pressure is increased, generally it indicates an inflammatory affection. Pressure upon the stomach frequently causes sickness and belching; pressure upon the colon, desire for stool; and pressure upon the bladder, desire to urinate.

Percussion gives *a tympanitic tone* whenever there is gas or air in the abdomen, unless the enclosed walls are too greatly distended; and *an empty tone* wherever there are solid bodies or fluid effusions in the abdomen.

In this way we are enabled to determine the extent of the enlarged liver, spleen, hardened stomach, tumors and fluid effusions of the peritoneum or ovaries; also, the accumulation of gas in the stomach and intestines, or the peritoneal sac, called *tympanites.*

Ausculation teaches very little, except what I have mentioned already, in regard to the visible pulsation of the abdomen. Fœtal pulsations.

Special Forms of Abdominal Disorders.

We have again a long run before us. The organs in the abdominal cavity are many; each of them may be differently affected; consequently the special forms of abdominal affections must amount to quite a considerable number.

I shall speak at first of the *pathological conditions of the stomach.*

Dyspepsia, *Indigestion.*

What a common-place word "dyspepsia" has become amongst the people, and the common run of practitioners! So common, indeed, that it is almost nauseating to be obliged to hear everywhere the conjugation of the present tense of the word dyspepsia: "I am dyspeptic, thou art dyspeptic, he, she or it is dyspeptic; we are dyspeptic, you are dyspeptic, they are dyspeptic!" What under the sun could have made it so popular, if it were not its extreme convenience to put almost any sort of bad feeling about and around the pit of the stomach into one common big bag, so that again Goethe's words become verified: "There, where we haven't got the right idea, a splashing word is oft our saviour."

Dyspepsia means nothing more nor less than an *indigestion.* If you now consider for a moment all the circumstances by which indigestion may be caused, you will comprehend at once the wide mouth and the wide belly of that bag which is called *dyspepsia.* Still if, according to Pope, "One truth is clear, *whatever is, is right,*" I shall not attempt to destroy this convenient bag, but shall merely endeavor to divide it for a more intelligent use, into the following four departments:

1. Dyspepsia may be caused by anatomical changes in the digestive apparatus, as, catarrh, inflammation, thickening, ulceration, eruptions of the membranes of the stomach.

2. Dyspepsia may be caused by quantitative or qualitative alterations of the digestive secretions, as, alteration of the gastric juice, of the juice of the pancreas, of the secretions of the liver and of the intestines.

3. Dyspepsia may be caused by an abnormal condition of the nervous system, as we observe to be the case in consequence of mental

excitements, of too great mental exertions, and all such influences as disturb the normal actions of the nervous system.

4. And, lastly, dyspepsia may be caused by the use of irritating or stimulating food or drink; so that we find a whiskey-dyspepsia, a pepper-and-mustard-dyspepsia, a coffee-dyspepsia, and all sorts of other dyspepsias, among which we ought not to forget the ice-cream-dyspepsia and the sugar-dyspepsia.

The symptoms of such a disease, which has such different causes, must, of course, be variable, and I shall try to give you only the most prominent of its features.

Dyspepsia is characterized by—

1. *Want of appetite, or morbid appetite; craving for sour, acrid, spicy things,* &c.

2. *Accumulation of wind on the stomach,* and, in consequence of which, belching, oppression, palpitation of the heart.

3. *Formation of acids in the stomach,* and, in consequence, sour, rancid eructations, pyrosis, or heartburn, waterbrash.

4. The food does not digest at all; causing vomiting or diarrhœa.

5. The pit of the stomach is mostly sore to the touch; very sensitive to the pressure of clothes; it feels full, and is oftentimes swollen.

6. The patient feels unfit for mental and bodily work; he is morose, irritable, sleeps badly; and, if asleep, his sleep is full of dreams.

7. His face shows a relaxed, tired, weary, sad expression, with sunken, dull eyes; pale-grayish or yellowish color and pale lips.

8. His hands and feet are generally cold, and he is very sensitive to the cold.

9. Gradual falling away in flesh and strength.

Therapeutic Hints.—One thing, however, I must mention. When we find, in an acute disease, a patient strongly craving a particular thing to eat or drink, it is well and wise for the physician to satisfy this desire. In chronic cases, however, such as dyspepsia which may have grown big by yielding to such morbid desires, it is absolutely necessary to strictly forbid the use of all such irritating nourishments, otherwise we feed the animal which we want to kill.

For special hints compare Gastric Catarrh, acute and chronic; Liver Affections, Pancreatic troubles, &c.

Vomiting.

Vomiting consists pathologically in an antiperistaltic contraction of the stomach, and a spasmodic contraction of the diaphragm and

abdominal muscles, caused either by a direct influence of the brain, or, which is much more frequently the case, an irritation of the nervus vagus, either in the stomach or in the pharynx, or by irradiation—(*sympathetic.*)

In cases of sudden and violent vomiting, especially if it happens to otherwise healthy persons, we ought to think:

1. Of *poison:* to ascertain which we must examine chemically what the patient throws up or what remains of what he partook. It may be arsenicum, corrosive sublimate, nitrate of silver, zincum, or stannum, tartarus emetic, phosphorus, iodine, different kinds of acid, sulphuric, nitric, or muriatic, alkalies, as caustic potash, or vegetable or animal poisons.

2. Of *pregnancy:* it sets in sometimes immediately after conception, sometimes not before the first menstrual discharge should come on and does not. It lasts, in many cases, through the first half of pregnancy; in some longer, and in some it passes over quickly or does not set in at all. During parturition I have frequently observed vomiting shortly before the birth of the child.

3. Of *incarcerated hernia, intussusception*, or *invagination*, which is generally attended with obstinate constipation.

4. *Vomiting from affections of the stomach* may have its cause in a simple overloading of the stomach with indigestible food, or in catarrh of the mucous membrane of the stomach; for example, in drunkards; or, in an ulcerated state of this membrane, in cancer of the stomach.

5. Vomiting may also be caused by diseases of the peritoneum and intestinal canal; from affections of the liver, spleen, pancreas, and urinary organs.

6. Sometimes it may be merely the effect of the mechanical concussion during hard coughing, laughing, &c.

7. Vomiting from affections of the brain is found in consequence of external injuries of the head and concussion of the brain; may be caused by strong impressions upon the sensorial and sensitive nerves; the swinging motion of a ship, sea-sickness, &c.; is found in hyperæmia and anæmia of the membranes of the brain; in inflammation of the brain and its membranes; in different organic diseases of the brain; in megrim and sick headache.

Therapeutic Hints.—If vomiting is caused by poison it is necessary that the poison be removed or neutralized.

I shall not undertake to specify all the antidotes of the different poisons. These you will find in the Materia Medica, and they are very well arranged in Dr. Hering's "Domestic Physician."

If it is caused by an incarcerated hernia it is necessary that the hernial sac be put back by manual operation.

Acon., Nux v., Sulph., Lyc., Opium.

For vomiting in pregnancy, Nux v., Veratrum, and others.

For all other kinds of vomiting we must select the remedy in accordance with the indications in each individual case.

Acute Catarrh of the Stomach, Gastritis.

Pathologically gastritis is similar to a catarrhal inflammation of any other mucous membrane. We observe redness and velvet-like swelling of the mucous membrane, which is oftentimes covered with a tough, transparent, or whitish-gray slime. In severe cases the mucous membrane is so softened that it may easily be scraped off like a mushy covering.

Primarily, this catarrh may be caused by taking cold or getting wet, like any other catarrh; but principally it is caused by either too cold or too hot food or drink; or certain kinds of food, like too fat or old meat and fish, pork, sausages, cheese, alcoholic drinks, ice cream, ice water, etc.

Starvation is not less a cause of it. Also mental exertions and excitement, fright, grief, worriment, and the like, may cause it.

Secondarily, we find it in combination with the perforating round ulcer of the stomach; cancer of the stomach; as a continuation of inflammation of the fauces and the œsophagus; inflammation of the intestines; or as a concomitant of typhus, pneumonia, exanthematic fevers, and erysipelas.

The heat of the summer is most favorable for its development; no doubt on account of the free use of ice water in a heated stomach; but it also frequently occurs in spring and fall.

Symptoms.

The patient gets morose; feels weak and chilly, with paleness of the face and cool extremities. The chilliness alternates with flushes of heat, red face, and febrile motions. The pit of the stomach feels full, and sore to the touch, so that even the pressure of garments feels uncomfortable. The appetite is gone; thirst, however, is generally present. At the same time the patient feels nauseated; frequently gulps up a sour or flat-tasting fluid; and generation of gas in the

stomach swells the region of the stomach and causes belching of wind. In the cases in which the catarrhal affection extends into the bowels, it causes rumbling flatulency, escape of fetid flatus, and mushy, fetid discharges. At the commencement of the disease the bowels are mostly constipated, and urine is dark-colored. Toward the close we frequently observe the formation of herpes labialis or hidroa.

Therapeutic Hints.

Acon., after taking cold; stitch-like, burning, and pressing pain in the pit of stomach, with anguish and fear of death; great thirst and vomiting.

Ant. cr., total loss of appetite; tongue thickly coated, yellow or white; great thirst *at night;* nausea; belching, with taste of what had been eaten; vomiting; after bad, sour wine; bathing.

Apis, painful sensitiveness in the pit of the stomach, with burning; painless, yellow diarrhœa.

Arnica, after a blow or fall; sense of fulness in the pit of the stomach; belching, with taste of putrid eggs; hot head, remaining body cool.

Arsen., nausea and vomiting, worse from rising up; quick prostration; anxious restlessness; great thirst, but drinking little at the time; after abuse of ice, ice water, ice cream, vinegar, sour beer, tobacco, (chewing,) alcoholic drinks.

Bell., cutting pain in the stomach, worse from motion and pressure; vomiting; gagging; hiccoughing; great thirst, but drinking makes it worse, consequently the patient abstains from drinking.

Bryon., stitching pain in the region of the stomach, worse from motion, and especially from a misstep; tongue coated; dry without thirst; or else great thirst day and night, and drinking large quantities; constipation. In warm weather, and after eating of flatulent food.

Carbo veg., great deal of belching, sour and rancid; burning in the stomach; bloatedness of the abdomen; disgust for meat; desire for acids; after debauching.

Cham., bitter taste in the mouth; vomiting of bile or green mucus; belching; rumbling in the bowels; hot and red face; much excited, as if beside himself; sleeplessness; after offence, vexation, anger.

China, feeling satiated all the time; however, when trying to eat, he can eat something, but feels bad afterwards, and cannot say how; fulness in the stomach and bowels; belching; sour rising; cold feeling in the stomach; great lassitude and weakness.

Euphorbia corollata, sudden nausea, vomiting and diarrhœa of watery fluid, with sinking, anxious feeling of the stomach; faintness; slow and weak pulse; cool skin; cool hands and feet, which become affected with cramps.

Hydrastis, dull, *aching* pain in the stomach, which causes a very weak faintish feeling, "goneness" in the epigastric region; acidity; constipation.

Ipec., constant nausea proceeding from the stomach, with empty eructations and accumulation of much saliva; easy vomiting; diarrhœa; after eating sour, acrid things, sour, unripe fruit, berries, salads, &c.

Iris versic., great burning distress in the epigastric region; vomiting with diarrhœa, accompanied with great prostration; burning in the mouth, fauces and œsophagus; and headache.

Nux v., always after the use of tinctures, mixtures, tonics, vegetable pills, coffee, wine, condiments; after mental over-exertions; in leading a sedentary life; bitter or sour taste; sour belching; fulness and pressure in the stomach; constipated bowels; dizziness, headache; irritable, cross: all worse in the morning, in the open air and after eating.

Podoph., food turns sour after eating; belching of hot flatus, which is very sour; great thirst; vomiting; the stomach contracts so hard and rapidly in the efforts to vomit that the wrenching pain causes the patient to utter sharp screams; vomiting of bilious matter, mixed with blood.

Puls., no appetite; no thirst; bitter taste in the mouth; every thing tastes bitter; dizziness when rising from a chair; chilliness; after fatty substances—pork, pastry, rancid butter, &c.

Rumex, shootings from the pit of the stomach into the chest in various directions; aching pain in the pit of the stomach, and aching and shooting above it in the chest; fulness and pressure in the pit of the stomach, extending towards the throat-pit; it descends towards the stomach upon every empty deglutition, but immediately returns; flatulence; eructations; pressure and distention in the stomach after meals.

Sanguin., nausea, with headache, chill and heat; vomiting, with severe, painful burning in the stomach, and intense thirst; red tongue; red and dry lips; hot and dry throat; tickling cough.

Sepia, sensitiveness of the pit of the stomach to touch; bloatedness of the abdomen; congestion and heat of the head; headache; tongue coated *without lustre;* often sore and covered with little blisters on the

edges and tip; sour smell from the mouth, and likewise of the urine, which is clear like water, or pale-yellowish; constant drowsiness; anxious dreams, and great fever heat; especially in children, from taking cold when the weather changes.

Chronic Catarrh of the Stomach

Is, in many cases, only a continuation of an ill-managed, acute attack, but it may grow out of too free a use of spirituous liquors, coffee, chewing and smoking of tobacco; it may have its origin in gluttony, sedentary habits, mental exertions, long-continued mental emotions, &c.

Secondarily, it has been observed accompanying heart, liver, lung and pleura affections; anæmia, chlorosis, Bright's disease, marasmus, tuberculosis, gout, cancer, hemorrhoids.

Its most permanent symptoms are, *belching after eating*, mostly sour, and attended with heartburn; *pressure and full feeling in the epigastric region, with actual distention of the same.*

Other symptoms are, nausea and vomiting, loss of appetite, or, after fasting, ravenous hunger, with gaping and faintness; after eating always pain in the stomach. Such patients always feel weak; they are morose, irritable and quite sleepy through the day. By-and-by their skin becomes pale and dry, and they become emaciated.

Its progress is a slow one, and whether curable or not curable, depends entirely upon its combination with other diseases.

On the authority of Kafka I shall give the following therapeutic remarks:

Aching or burning pain in the pit of the stomach; increased from palpation or pressure of the clothes; and *distention of the epigastric region,* Bell., Phos., Arn., Ars.

Aching in the pit of the stomach, not much increased by external pressure, Bell., Phos., Hepar, Ign., Nux. v., Arn., Calc., Zinc.

Aching in the pit of the stomach, not increased by external pressure, Carbo veg., China, Chinin. sulph., Caps., Natr. m., Lyc., Sulph.

Sour stomach, with sour belching and taste; heartburn; gulping up and vomiting of sour matter, Nux v., Calc. c., China, Phos., Sulph., Kali c., Carbo veg.

Sour stomach always after eating, Nux v., Kali c., Natr. m., Sulph., Phos., Sepia.

Rancid belching, Puls., Carbo veg., Magn. mur., Sulph., Asa fœtida.

Foul belching, Sepia, Phos., Ars., Arn., China, Ferr. ac., Merc.

Much mucus in mouth and stomach, Puls., Amm. mur., Natr. m., Arn., Sulph.

Accumulation of bile in the stomach, with bitter taste, bitter belching, and vomiting, Cham., Puls., Ars., Ipec., Nux. v., Ver.

Much wind in the stomach, with distention, Nux v., Carbo veg., Ign., Arn., Sulph., Ars., Phos.

Distention of the abdomen, Carbo veg., Nux v, China, Arn., Natr. m., Phos., Sepia.

Relief from eructations, Lach., Carbo veg., Ign., Lyc., Tart. em., Nux v., Sulph.

Relief from wind passing down, Nux v., Carbo veg., Puls., China, Cham., Lyc.

Worse from accumulation of flatulence, Nux v., Carbo veg., Puls., Ign., Natr. m., Phos., Arn., China, Cham., Kali c., Coloc.

Slow digestion, Nux v., Ign., Phos., China, Opium.

Total loss of appetite, Nux v., China, Sepia, Natr. m., Ars.

Feeling of emptiness and hunger in the stomach without desire for food, Natr. m., Opium, Ars.

Ravenous hunger, Nux v., Calc. c., China, Jod., Natr. m., Phos.

Worse after eating, Nux v., Calc. c., Phos., Natr. m., Sepia, Sulph.

Disgust against meat, Sulph., Sepia, Petrol., Muriatic ac., Natr. m., Carbo veg., Ars.

Sleepiness in the day-time, Natr. m., Puls., Sepia, Calc. c., Carbo veg., Chinin., Kali c.

Great weakness and loss of energy, China, Chinin. sulph., Ars., Phos., Jod., Ferr. ac.

Gastritis Toxica seu Caustica, *Inflammation of the Stomach in consequence of Poisoning.*

Such poisoning is caused by concentrated or diluted mineral acids, caustic alkalies, salts and metals, acrid, vegetable, or animal poisons, and ætherial oils.

Diluted mineral acids change the epithelium and the superficial layers of the mucous membrane of the stomach into a soft, brownish, even blackish mass. Concentrated mineral acids change all layers of the mucous membrane into a blackish mass; the other coats of the stomach become softened, and, in some rare cases, perforated—eaten through. The blood in the vessels of the stomach and in the adjoining larger vessels is black and tough, like tar. Caustic alkalies —for example, the kali causticum or ammonium causticum—change

the epithelium and the mucous membrane of the stomach to a pappy, discolored mass; they destroy and perforate the coats of the stomach much more frequently than acids do.

Salts of metals, like verdigris, corrosive sublimate, argentum nitricum, tartarus emeticus, likewise arsenicum and phosphorus, cause brown scurfs, surrounded by injected and swelled portions of the mucous membrane of the stomach. Acrid, vegetable, and animal poisons, and ætherial oils cause a highly-inflamed state of the mucous membrane of the stomach.

Poisoning is characterized by the following symptoms: violent pain in the stomach and bowels; vomiting of slime or bloody masses; slimy, diarrhœic discharges from the bowels mixed with blood; and tenesmus; the features of the face become distorted; there is sudden loss of strength; coldness of the extremities; and cold, clammy perspiration; the pulse is small and thread-like.

If the patient informs us what he has swallowed our diagnosis is safe enough. If not, the ejected masses will have to be examined. Mineral acids and caustic alkalies leave their traces also upon the mucous membrane of the mouth and fauces.

Therapeutic Hints.—If we see a case soon after the swallowing of poison, this poison must be neutralized—acids by alkalies and alkalies by acids.

Chronic consequences require after acids, Calc. c.; after alkalies. Nitr. ac.; after ætherial oils, Nux. v., Ars.; after metals, Hepar.

Gastralgia, Cardialgia Nervosa, *Cramp of the Stomach.*

This affection is characterized by attacks of great pain in the stomach, which come at intervals, leaving the patient free from pain between the attacks; there is no structural change of the stomach effected by it. We frequently find this complaint, however, in connection with anæmia, chlorosis, tuberculosis, or great loss of vital fluids; also with chronic catarrhal affections of the stomach, the round perforating ulcer, and cancer of the stomach; also with diseases of the womb, as falling or dislocation of the womb; catarrh or ulceration of the mouth of the womb; too scanty or too profuse menstruation; also, with diseases of the spine, especially such forms as present an intermittent character; and finally we observe it frequently in consequence of depressing mental emotions; chilling the stomach by drinking ice water or eating ice cream whilst being heated;

or after the use of lemon-juice, or other acid fruits, coffee, fresh bread, and hot cakes, and other things which are difficult to digest.

The attack usually commences with a feeling of pressure in the pit of the stomach, frequent yawning, coldness of the extremities, and an uncomfortable feeling in the middle of the spine, which induces the patient to bend backwards frequently. Sometimes, without such premonitory signs, a violent pain in the stomach sets in at once, which may be various in character—pressing, drawing, burning, boring, gnawing, cramp-like, &c., amounting, sometimes, to such a degree of severity that the patient faints away; his face appears collapsed, his extremities become cold, and his pulse small and thready. The pain seems to radiate from the spine and reflects upon the chest, where it causes asthmatic symptoms; or, it reflects upon the œsophagus, causing the so-called globus hystericus; or, upon the larynx, causing choking; or, upon the sympathicus, causing spasmodic laughing and crying; or, upon the nerves of the cranium, causing hemicrania; or, upon the intestines, causing pain in the bowels and diarrhœa. The pain is oftentimes relieved by hard pressure upon the stomach, but sometimes the patient cannot even bear the pressure of the clothing. The pit of the stomach is, in some cases, distended; in others it is drawn in; often we observe a pulsation in the epigastrium.

The attack generally ends with belching of wind; vomiting of watery, sour fluids; passing of watery urine, and with a gentle perspiration. In some cases there is a great accumulation of wind in the stomach, so that the pit of the stomach and the bowels are greatly distended, with constant belching and rumbling in the bowels. Belching and passing wind generally brings relief.

Therapeutic Hints.

Arg. nitr., in the middle between the xyphoid cartilage and the navel a small spot, which is very sensitive to the slightest pressure; from this spot a very severe pain spreads to the hypochondriac region, into the back, up into the shoulders, even to the head; gradually increasing in intensity, and as gradually leaving again.

Arsen., burning pain, as of red-hot coal; pit of stomach sensitive to slightest touch; vomiting of ingesta as soon as taken; anguish; restlessness; fainting; face pale, earthy; worse from eating and touching; better from warm applications; after eating ice cream, ice water.

Asa fœt., pressing, cutting, stitching pain in spells; eructations of a smell like garlic, or feces; accumulation of gas; constantly pressing

upwards, none downwards; gulping up of rancid, acrid fluids; obstinate constipation.

Bell., gnawing, pressing, crampy, drawing, wrenching pain, which compels the patient to bend backwards, and to hold his breath; great thirst, but worse after drinking; face hot, red, bloated; pupils enlarged; especially for the female sex, when the menstrual period has been disturbed.

Bryon., pressing pain, as of a stone or a load in the stomach; worse from eating or drinking; from any motion; better when lying quiet on the back.

Calc. c., pressing pain, as of a load or stone in the stomach; or from the abdomen rising up into the throat; sour belching and vomiting, better from motion; too profuse catamenia.

Carbo veg., after Nux v., burning pain, extending down to the small of the back, and up to the shoulders; sour, rancid belching; cold limbs; cold sweat; worse from lying down; after rich living; drinking of spirituous liquors.

Chelid., gnawing, grinding pain, ameliorated by keeping on eating something constantly.

Coloc., violent cutting, tearing pains, which, from different parts of the chest and abdomen, concentrate in the pit of the stomach; relieved by hard pressure and bending double; after vexation and indignation.

Ferr., pressure in the stomach; vomiting of ingesta, and better afterwards; worse after drinking milk; chlorotic and anæmic individuals.

Gelsem., sensation of a heavy load with weight; tension and dull pain; sometimes with empty, faint sensations in the epigastrium, and a false hunger—a kind of gnawing.

Ign., gnawing, cutting pain in the stomach; faint feeling; false hunger; collection of water in the mouth; nausea, and vomiting of mucus; poor digestion; bloated stomach; pale, watery, profuse urine; after grief or poor living; habitual smoking.

Leptandra, sharp, cutting pains at intervals in the lower part of the epigastrium; constant aching distress; worse from drinking cold water; after rising; great desire for stool, that cannot be retained one moment.

Nux v., pressing, constricting, clawing pain in the pit of the stomach, extending into the chest, or towards the small of the back to the anus, which is drawn in; worse after eating and drinking; better from belching; after vomiting; from bending forward and rubbing the

pit of the stomach; headache; loss of appetite; or hunger, with fear of eating; belching, vomiting, and gulping up of sour substances; constipation; hemorrhoids; suppressed menstruation; complaints from the use of coffee or liquors; sedentary life; night-watchings; anger and worriment; always after previous use of nostrums.

Petrol., pressing, drawing pain, ameliorated by keeping on eating something constantly. Compare Chelid.

Phos., a singular rising of the swallowed food by mouthfuls; pain worse after eating; during the presence of morbid hunger eating relieves for a short time; decidedly better when keeping warm in bed.

Plumbum, the patient bends backwards during the spell; gets better from hard external pressure upon the stomach; afterwards yellow appearance of the white of the eyes; badly-smelling sweat of the feet.

Puls., dizziness when rising; loss of appetite; no thirst; sour or bitter vomiting; after eating fat meat, cakes, pastry, and drinking whiskey.

Ulcus Ventriculi Perforans, (rotundum, chronicum,) *the Round Perforating Ulcer of the Stomach.*

The seat of this lesion is mostly at the pyloric portion of the stomach, on its lesser curvature. It was also frequently observed in the duodenum, in cases of Chickahominy diarrhœa. Only one ulcer is usually found; sometimes, however, there are two, three, or more. Its size varies: it may be smaller and larger than a three cent silver piece; its shape is round, sometimes oval; and in cases where several ulcers join, it is irregular. On the inside of the stomach it is largest, and grows smaller in its progress of eating through the different layers of the stomach, so that it assumes a funnel-shaped appearance. When it reaches the serous membrane of the stomach it causes peritoneal inflammation and fibrinous exudation, which cause adhesions with the adjoining organs, as the pancreas, liver, omentum, and colon. When even this last or external membrane is eaten through it causes peritonitis and hæmatemesis.

This ulcer may heal in all its different stages, in which event new granulations are formed, and the whole is shut by a flat, radiated cicatrix. In consequence of which it sometimes happens that the pylorus becomes constricted, so that the exit of the food into the intestines is

impeded. Such a cicatrized induration of the pylorus can generally be detected by palpation in the pit of the stomach as a hard swelling.

In regard to its origin we are quite in the dark. Rokitansky considers as the next cause hemorrhagic erosions. They consist, according to Virchow, in obstructions of arterial vessels, in consequence of which the mucous membrane becomes deprived of its necessary nutriment and dies off, and by the corroding effects of the acids of the stomach is eaten out deeper and deeper.

The *symptoms* are as follows: *pain*, exactly as in nervous gastralgia, in the pit of the stomach, coming in spells before and after eating, ameliorated, sometimes ceasing, after vomiting of slimy, tough or watery, clear, tasteless or sour fluid, often containing blackish or brownish flakes. Sooner or later the patients become of a pale or yellowish aspect in the face. They fall away in flesh, and are sad and morose, in this respect differing from mere nervous gastralgia.

Vomiting is not only found during the cardialgic spells, but also between these spells, although in exceptional cases vomiting is not at all a prominent symptom. It generally happens soon after eating, and frequently without previous nausea, and without great exertion. Acrid, sour, indigestible food causes it most frequently. It frequently contains particles of decomposed blood in the form of blackish or brownish flakes and masses, and sometimes even clear blood in large quantities.

Indigestion. In some cases the appetite is little or not at all changed, but in severer cases it is usually diminished, or altogether absent. Eating most frequently causes pain, and digestion is very slow. Milk and white meat are best digested. We find, also, frequent eructations, nausea, pyrosis or waterbrash. The saliva seems to contain much less rhodan kalium than usual; costiveness.

When perforation takes place, which may happen either spontaneously or in consequence of a strong concussion of the body, or from overloading the stomach, or during a hard attack of vomiting, we have in a very short time all the symptoms of a *peritonitis*. The patient soon feels a stitch-like or cutting pain, altogether different from that of a cardialgic spell; he is seized by a violent chill and vomiting, and his features become collapsed, distorted, pale, expressing deep pain and agony. The abdomen is distended and very painful, especially when touched. Respiration is short, superficial, without any respiratory motion of the diaphragm. There is singultus; violent action of the heart; frequent, small pulse; fainting spells; decrease in natural temperature; great prostration.

Differential Diagnosis.

It may easily be confounded with *chronic catarrh of the stomach.* The round ulcer, however, generally has a clean, red tongue; much more frequent vomiting, very often containing either fresh or decomposed blood.

It may be easily confounded with *nervous cardialgia.* The round ulcer, however, has a falling away of flesh and change in features, pale, yellowish face, and vomiting between the cardialgic spells, which we do not observe in *gastralgia.*

It may be confounded with *cancer of the stomach;* cancer, however, comes at a later period of life; tells much quicker upon the general constitution, as wasting away in flesh, and by its hard swelling in the pit of the stomach, which is observed in cases of round ulcers, only when the pylorus becomes cicatrized.

Therapeutic Hints.—Compare *Gastralgia.*

Arsen., vomiting of black, decomposed blood; burning pain; always worse after eating or drinking; gray-yellowish color of the face.

Atropin, pressing pain after eating; and vomiting of acrid, sour masses which set the teeth on edge; hard swelling in the region of the pylorus, just above the navel towards the right; very sensitive to touch; excruciating pain in the stomach; constant vomiting; deadly paleness of the face, with cold perspiration; hands and feet icy cold; pulse very small. Peritonitis in consequence of perforation of the stomach.

Carbo veg., gray, yellowish face; dry tongue; vomiting of sour, bilious or bloody masses; burning in the stomach; worse after eating; better from drinking cold water; eructations; distortion of stomach and bowels; costiveness.

Conium, Coniin, vomiting of black masses like coffee-grounds in clear, sour water; violent pain in the stomach, always two or three hours after eating, but also at night; somewhat relieved in the knee-elbow-position; swelling in the region of the pylorus.

Kali bichr., ulcers are oval; they corrode and become deeper without spreading in circumference; pressure and heaviness in the stomach after eating; giddiness, followed by violent vomiting of a white, mucous, acid fluid, with pressure and burning in the stomach; vomiting of sour, undigested food; of bile, bitter; with pinkish, glairy fluid; of blood, with cold perspiration on the hands; burning in the stomach; heat of the face; all which symptoms decidedly suggest its application in the round perforating ulcer of the stomach.

Lycop., earthy color of the face; rising of sour, acrid fluid; vomiting of sour water and mucus; fulness of stomach and abdomen; pain in the stomach after eating; rumbling and gurgling in the abdomen: constipation; scanty urine; worse from sitting bent; better from rising and walking about; no pain at night, when warm in bed.

Mezer., constant, violent pain and pressure in the stomach after eating, no matter what, even simple things like broth, milk, bread; a constrictive squeezing pain; under much belching from one to two hours after eating; the pain reaches its height and ends with vomiting and gulping up what has been eaten; constipation; circumscribed redness of the face; skin cool; pulse very small and frequent; chilliness alternating with flushes of heat.

Sepia, yellow bridge over the nose; earthy complexion; sour taste in the mouth after eating; vomiting of mucus; pain in the stomach after eating the simplest kind of food; hardness in the region of the pylorus; constipation; stitching all over the body, with breaking forth of little pustules; menses scanty.

Silic., yellowish complexion; screwing, pressing, twisting pain after drinking; pyrosis and vomiting after eating.

Sulphur, constant pain in stomach and back after suppressed itch; sour taste in the mouth and sour vomiting; constipation; piles; cold legs.

Carcinoma or Scirrhus Ventriculi, *Cancer of the Stomach.*

According to pathological researches, cancer of the stomach has been divided into three different forms: 1, *Scirrhus*, which is a fibrous growth, and which generally originates in the submucous cellular tissue; 2, *Carcinoma medullaris*, which is a marrow-like growth; forming round isolated lumps in the mucous membrane of the stomach, and spreading sponge-like upon the inner surface of the stomach; and 3, *Carcinoma alveolaris*, which is a jelly-like growth, likewise investing at first the submucous cellular tissue, but penetrating frequently to the peritoneum, and forming upon it large tumors. All three kinds of cancer may be often seen together; and they mostly invest the pylorus, sometimes the lesser curvature, still rarer the cardia, and most rarely other parts of the stomach.

It is often the case, that the diseased pylorus forms adhesions with adjoining organs; such as the pancreas, liver, kidneys, and colon, which are mostly invested by the same morbid product, keeping the stomach in a fixed position. When, however, such adhesions do not

take place, the stomach sinks, in consequence of its increased weight, lower down into the abdominal cavity; remaining there, either perfectly free and movable, or adhering to organs lower down; such as portions of the intestines, the uterus, or its appendages.

The inner cavity of the stomach is much changed by this disease. It becomes greatly *enlarged* by stricture of the pylorus, much diminished by stricture of the cardia, and cancerous degeneration of the coatings of the stomach. The mucous membrane, in the neighborhood of the cancer, exhibits chronic catarrhal inflammation, which is sometimes spread all over it; and, in the further progress of the disease, ulceration and arrosion of smaller or larger blood-vessels with consecutive hemorrhage obtain.

The causes of carcinoma of the stomach we do not know; just as little as the causes of cancer on any other part of the body. It has been observed most frequently between the years of fifty and seventy.

Symptoms.

1. General *cancer-cachexia*; emaciation; paleness of the skin and the mucous membranes; ash-colored or yellowish color of the face; brittle, dry, harsh and wrinkled skin; peeling off of brany scales, especially from the lower extremities. The expression of the face is sad; the eyes are fallen in; the malar bones stick out; the ankles are œdematous.

2. *Swelling in the pit of the stomach.* This is present, however, only when the cancer invests the pylorus. In this case we observe a roundish, or oval, or irregular lump to the right above the navel under the upper part of the right rectus abdominalis muscle. It is always there, and cannot be moved, if the pylorus have formed adhesions with neighboring organs; but it changes position and is movable, when those adhesions are not formed. In this latter case it gradually sinks down into the abdominal cavity, and may appear below the navel; or even but little above the symphisis pubis, either as a movable or fixed tumor. But when the pylorus-carcinoma is covered by the left lobe of the liver, or by a distended colon, it cannot be felt at all. The same is true, when the carcinoma has its seat on the cardia or on the lesser curvature. Cancerous degeneration of the arterior wall of the stomach is felt as a resisting mass in the epigastrium, changing position, however, according to the position of the patient; and according to the fulness or emptiness of the stomach, may be felt more towards the right or towards the left side, higher up or lower down, even below the navel.

3. The stricture of the pylorus causes, further, *a sinking in of the abdomen;* the intestines are empty, because food is prevented from going through the pylorus; the abdominal walls are thin, wrinkled, like parchment; they may be lifted up in folds which remain; the subcutaneous cellular tissue is wasted away, and the full percussion sound is wanting. The spine even may be felt through the abdominal walls, and the aorta descendens pulsates perceptibly. When there is a stricture of the cardia, we find the *epigastric region is fallen in;* because in such a case the stomach grows smaller, sufficient nourishment not being allowed to enter; the intestines are likewise empty, and the abdomen is fallen in; whilst the ribs and the processus xyphoideus stand high up.

4. *Vomiting.* This happens if there is a stricture of the pylorus; generally from four to five hours after eating. The masses which are thrown up are digested. In case of stricture of the cardia, the vomiting takes place immediately after or even during eating, without nausea or exertion; it is only a regurgitation of the swallowed food. If diverticles or widenings of the œsophagus exist at the same time, the vomiting follows a little later. The masses which are thrown up are the same as swallowed. If the cancer has its seat on another part of the stomach, the vomiting may be entirely absent; or it may, after having been regular for a time, slacken off, and cease altogether. So also the vomiting may cease if the stricture of the pylorus, by softening, gets removed; or if the walls of the stomach, by diffused cancerous degeneration, lose all power of contracting.

5. *Hemorrhages from the stomach.* The blood is thrown up either decomposed as a brownish, chocolate-like mass; or when larger blood-vessels have been destroyed by the cancerous process, it comes up clear.

6. *Pain in the epigastrium,* which has its seat generally in the cancerous tumor, is worse from eating; lancinating, eradiating towards the spine or towards the umbilicus.

7. Appetite is generally diminished; in some cases, however, it is increased; but the patients are afraid to eat, because they know they have to vomit it up, and that the pain will increase.

8. The stool is usually retarded; but when the cancerous growth softens and dissolves, we observe colliquative diarrhœa; and when there is hemorrhage in the stomach, the evacuations are bloody.

Differential Diagnosis.

At its commencement it can hardly be distinguished from a *chronic catarrh of the stomach;* but in its progress cancer has the following distinguishing features: more violent pain of a radiating nature; tumor in the epigastrium; now and then coffee-ground looking emesis; rapidly-developing marasmus; ashy or yellowish color of the face; and the age of the individual—over forty years; all of which is not applicable to the chronic catarrh of the stomach.

The symptoms of cancer are also very similar to those of the *perforating ulcer of the stomach.* Both have pain; both may have coffee-ground emesis; both may have hemorrhages from the stomach, and even a tumor in the epigastrium. But cancer never sets in before the fortieth year of age, lasts upon an average not longer than one year, and shows a steady progress in general decay; whilst the ulcer befalls also persons under forty years of age, may last for several years, or end quickly by perforation and subsequent peritonitis, and does not so rapidly develop a cachectic appearance of general decay.

Cancer is distinguished from *cardialgia* in that it grows uninterruptedly and gradually, whilst cardialgia comes in spells, with intervals of health; further, by the age of the person, and its inroads upon the general constitution.

How can we know what kind of cancer it is?

A very slow progress of the disease, together with additional ascites, make it probable that it is a jelly-like cancer—*carcinoma alveolaris.* An acute process and rapid growth of tumor, with frequent and large hemorrhages, point to *carcinoma medullaris.* A slow progress and considerable hardness and nodulated appearance of the tumor indicates a *scirrhus.* This latter is by far of the most frequent occurrence.

Therapeutic Hints.

Arsen., burning pain in the stomach; better from warm applications; vomiting of all he takes; vomiting of black substances; prostration; emaciation; restlessness.

Bell., cutting, clawing pain; nausea, gagging and vomiting; staring eyes; dryness in mouth and throat; fainting.

Bismuthum, violent, crampy pains; burning and stinging in the region of the stomach; stomach enlarged, hanging down to the crest of the ilium; hard lump between the navel and the edges of the lower ribs on right side; scirrhus of the pylorus; abdomen bloated in ridges, with great rumbling of wind along the colon, which is rarely passed off, but then gives relief; vomiting, only in intervals of several days, when

the stomach has become filled with food, and then of enormous quantities, and lasting a whole day.

Carbo veg., burning pain, extending from the pit of the stomach into the small of the back; anxiety; cold extremities; cold, sticky sweat; intermitting pulse.

Carbo an., saltish water rises from the stomach and runs out of the mouth, accompanied by retching, and followed by violent, empty eructations, cold feet and hiccough; pressure, clawing, griping and burning in the stomach; scanty, hard stools in lumps; copper-colored eruption on the face.

Con., vomiting of chocolate-colored masses, sour and acrid; pressing, burning, squeezing pain, extending from the pit of the stomach into the back and shoulder.

Kreos., painful, hard place on the left side of the stomach.

Lachesis, gnawing pressure, relieved after eating, but coming on again in a few hours, and the more violent the emptier the stomach; great sensitiveness to contact, especially to that of his clothes; drunkards.

Lyc., after eating or drinking; vomiting of dark, greenish masses; bloatedness of the stomach and bowels; rumbling in the bowels; obstinate constipation; hard swelling in the epigastric region.

Mezer., great emaciation; the muscles of the face are tensely drawn, like strings; constant vomiting of chocolate-colored masses, with great burning in the throat; violent retching, accompanied with the agony of death; sleeplessness and exhaustion; obstinate constipation; hard lumps in the epigastric region.

Phos., epigastric region sensitive to the touch; constant nausea and fulness in the stomach; after eating, or drinking even a swallow of water, vomiting of a sour, foul-smelling fluid, which looks as though it had been a mixture of water, ink and coffee-grounds; in the sunken abdomen, a circumscribed, hard swelling; pale, earthy complexion; great emaciation; sleepiness; peevishness; fine gurgling noise in the abdomen; urine scanty, red, or brown, with reddish or yellowish-red sediment; bowels constipated.

Sepia, sour taste after eating; vomiting of mucus; caused by taking even the simplest food; the pain in the stomach increases by vomiting, and extends to the back, with anxiety; oppression of the chest and cold perspiration; hard places in the region of the pylorus; constipation.

In addition, compare the Round, Perforating Ulcer, Gastralgia, and Catarrh of the Stomach.

Hemorrhage from the Stomach, Hæmatemesis,

Consists in an extravasation from the blood-vessels of the stomach—either the arteries, veins or capillaries—and may have two distinct causes, viz.: 1. An increased, abnormal pressure of blood towards these blood-vessels. Such is the case, *a. In all congestive, catarrhal and inflammatory affections of the mucous membrane of the stomach.* The bleeding in such cases is considerable, and comes from the capillary vessels. *b.* In all those cases in *which the free circulation of the blood is interfered with,* as in diseases of the vena porta, the liver, in consequence of constriction of the inferior vena cava, in heart and lung diseases, all of which cause a mechanical interference to the free circulation, and, in consequence, a stagnation and greater pressure of blood in the mucous membranes of the stomach. The bleeding in such cases is mostly capillary only; but it may amount to large quantities, if the pressure is great enough to rupture larger blood-vessels. *c.* Such is the case *where habitual bleedings have been suppressed, menstrual or hemorrhoidal.* Such bleedings are called *vicarious.*

2. The second distinct cause of the hemorrhage from the stomach *depends upon a morbid alteration of the coats of the blood-vessels.* Such an alteration may arise—*a.* From *chemical* or *mechanical influences;* as alkaline or corroding substances, or pointed objects within the stomach; from violent vomiting, straining, or the effects of a fall or a knock; *b. From pathological conditions,* such as varicose veins, and aneurismal arteries; *c. From general diseases;* as scurvy, yellow fever, and acute exanthematic fevers; *d. From ulcerative processes;* as the round perforating ulcer, hemorrhagic erosions and cancer of the stomach.

Post-mortem examinations exhibit the mucous membrane of the stomach pale and anæmic. After capillary hemorrhage we find here and there the mucous membrane injected; which causes blue or darkened patches; a slight pressure squeezes the blood out of them. On such places the mucous membrane is softened and easily removed, whereby slight depressions are formed, called *hemorrhagic erosions.* After profuse hemorrhages we find clots of blood; after slow bleeding or oozing out of blood we find the blood generally altered by the gastric juice into a substance like coffee-grounds.

Symptoms.

Slight hemorrhages usually cause no particular signs, except that we find traces of blood in the masses, which are thrown up. Profuse

effusions cause a feeling of warmth and fulness in the stomach; nausea and vomiting, and soon all the signs of depletion; as paleness, small pulse and cold extremities; great weakness; anxiety and oppression; singing in the ears; flickering before the eyes; dizziness and fainting.

The vomiting brings up the blood clear, in lumps, or already decomposed into a chocolate or coffee-ground-like substance. After the vomiting there is great thirst. Sometimes no blood is thrown up, but it is carried off through the bowels, making the feces appear dark, black, or like tar.

Differential Diagnosis.

It may be confounded with *hæmoptoë*. *Hæmoptoë* is preceded by heart or lung affections, attended by cough. We hear rattling noises in the chest. Hæmatemesis is preceded by affections of the stomach, liver, etc.; attended by nausea and vomiting.

Hæmoptoë generally yields bright, frothy blood. Hæmatemesis mostly dark or decomposed blood.

How can we discern whether the blood comes from the stomach or the intestines? In the ~~first~~ case the blood is always mixed thoroughly with the feces; whilst in the ~~latter~~ case it generally comes without fecal masses.

Therapeutic Hints.

Acon., in congestion and inflammation of the mucous membrane of the stomach; in scarlet fever, sometimes during desquamation, with excruciating pains in the stomach, gagging, retching, gasping for breath; distressed face; anguish; cold sweat on the forehead.

Arnic., when caused by external injuries; over-exertions; soreness all over the body.

Arsen., headache; roaring in the head; fainting; cold, distressed, yellowish or deadly pale, collapsed face; cold perspiration on the forehead; constant nausea; retching; great thirst; burning in the stomach; bloated abdomen; stitching pain in the spleen; black stools; groaning and moaning breathing; quick, trembling, thread-like pulse, 120–130 per minute; coldness over the whole body; great weakness; trembling, anxiety.

Bell., congestion of the head and stomach; singing in the ears; flickering before the eyes; red cheeks; feeling of fulness and warmth in the stomach.

Carbo veg., frequent fainting; hippocratic face; icy coldness of the extremities; intermitting, small, scarcely perceptible pulse.

China, great loss of blood; and in consequence excessive weakness;

paleness and coldness of hands and feet, like marble; sensitiveness to touch in the pit of the stomach.

Erigeron, violent retching and burning in the stomach.

Ferrum ac., pit of the stomach sensitive to touch, and soreness all over the abdomen; pulse full, excited; face pale; greatly exhausted.

Hamam., previous fulness and pain in the abdomen; feverishness by spells; bloody vomiting and stools; weak, cold, profuse sweat: weak and quick pulse; restlessness; fulness and gurgling in the abdomen.

Hyosc., dizziness; stupefaction; eyes red; face bloated; pit of stomach sensitive; dull aching in the region of the liver; abdomen bloated; limbs numb, weak, trembling; during vomiting convulsions, with loud shrieks, on account of crampy pains in the stomach.

Ipec., sudden attack; blood dark, black, sour; paleness; coldness; pulse scarcely perceptible; fainting; anxiety; pressure in stomach; great thirst; oppression of breathing; constipation or bloody stools.

Moschus, when the patient becomes pulseless and collapsed.

Nux v., throbbing pain in the head; pale, distressed face; belching; constant nausea; stomach full and distended; sore to the touch; burning anxiety and pressure in the precordial region; pain in the region of the spleen; constipation, with black stools; urine turbid, dark; fainting; weakness; temperature of the skin *increased;* pulse full, hard, quick.

Phos., bright blood; drowsiness; sleepy; face, lips, gums and tongue are pale; thirsty; loathing of food; heaviness and heat at the pit of the stomach, which is distended; abdomen soft; urine dark; skin warm, with partial perspiration; pulse quick, energetic.

Secale, the patient lies still, with great weakness but no pain; face, lips, tongue and hands deadly pale; skin covered with cold sweat; pulse frequent, thread-like; oppression; abdomen soft, without pain.

Ver., slow pulse; cool temperature of the skin; chilliness; fainting fits; inability to stand; moving or rising causes sickness in the stomach at once; cold sweat; even fainting.

When in connection with suppressed menstrual discharges, compare Con., Ip., Millef., Puls., Sulph.; with suppressed hemorrhoidal discharges, Carbo veg., Mill., Nux v., Sulph.; after mental emotions, Acon., Hyocs., Natr. m., Phos. ac.

When in combination with scurvy, typhus: Alumen, Ars., Carbo veg., Nitr. ac., Phos., Phos. ac., Sulph. ac.

In consequence of destructive processes within the stomach, compare Carcinoma et Ulcus Rotundum Ventriculi.

Gastromalacia, *Softening of the Stomach.*

Post-mortem examination reveals the coats of the stomach softened; changed into a kind of pappy mass; it can easily be scraped off. The affection is more or less extended and almost exclusively confined to the greater end of the stomach, or *fundus ventriculi*. And, notwithstanding such a complete decay, there is never found any sign of any catarrhal or inflammatory or ulcerative process in the whole mucous membrane of the stomach; neither is the decayed portion sharply defined, but passes gradually over into the healthy tissues. Its symptoms are such as are described under hydrocephaloid, or cholera infantum, the most prominent of which are constant vomiting and diarrhœa. The latest observations on this disease make it more than probable that *gastromalacia* is no disease, but a *chemical process of decay after death.* The reasons for this opinion are the following:

1. Softening of the coats of the stomach have been found in perfectly healthy individuals, who died suddenly or were executed after they had a short time previously partaken of food. Elsässer observes that the food which had been taken was easily prone to an acid fermentation, or contained already a natural acid, as wine, beer.

2. Experiments which Elsässer made show that such substances as easily undergo the process of acid fermentation, like sugar, milk, starch, &c., bring on this softening in a healthy stomach, taken out of a corpse under application of the same degree of heat which the body retains for some time after death.

3. The softening of the stomach is never found in a perfectly empty stomach, but always only in the presence of sour contents, and it is almost without exception found at the fundus ventriculi, that part of the stomach which lies deepest, if the body lies stretched out on its back, on a part, therefore, on which the fluid contents of the stomach mostly collect. Furthermore, the size of the softened tissue has been found to correspond with the surface that has been covered by these contents. Furthermore, Elsässer found that, if he brought the bodies of children who died with cholera infantum into another position, that then other parts of the stomach were softened, and the fundus perfectly free from so-called gastromalacia.

4. The symptoms during lifetime which are ascribed to gastromalacia are so inconsistent and varying, that it would be almost impossible to make a differential diagnosis. Some writers describe it as an acute, others as a chronic disease; some under the form of cholera,

others under the form of gastritis; others under the form of irritation, or congestion, or inflammation of the brain. Who is right? And the most constant symptom ascribed to this disease—the constant vomiting—does not very well agree with such a softened condition of the stomach as is found after death. For it is almost impossible to realize that a stomach so far decayed could bear such contractions and evolutions without bursting.

5. There is one symptom entirely absent during life which we should naturally suppose would necessarily occur, if such softening were really present during life, viz., the *absence of vomiting of blood.* Imagine the entire destruction of so large a piece of membrane which is full of blood-vessels without any bleeding! And yet, if this same organ is artificially injected after death, the injected matter escapes from all parts of the softened surface, why should not the blood during life do the same thing?

I will close by simply suggesting that time and research may reveal the fact, that many other conditions, now considered to be the result of morbid processes in the *living* organism, are but the products of changes which the body undergoes after it has been given over to the sole influence of chemical and mechanical agencies.

B. Diseases of the Intestinal Canal.

Catarrhus Intestinalis, Enteritis Catarrhalis, *Intestinal Catarrh.*

In its *acute form* this affection presents the same appearance as that by which a catarrhal inflammation of any other mucous membrane is characterized—injection, swelling, infiltration of the submucous tissue.

Primarily, it may take place after overloading the stomach; the use of purgative medicines; taking cold, and after mental emotions.

Secondarily, it accompanies tuberculosis, cancer, typhus, puerperal fever, pneumonia, dentition, and wide-spread external inflammations in consequence of burns.

The *symptoms* vary according to the locality of the affection. A catarrhal inflammation of the *small intestines* is almost always found in connection with catarrhal inflammation of the stomach, and is characterized by obstruction of the gall-ducts and consequent icterus. A catarrhal inflammation of the *colon* almost always involves the rectum, and is characterized by spasmodic pains in the sphincter ani, tenesmus,

and burning at the anus. A catarrhal inflammation confined to the *rectum* alone offers the same symptoms.

In all cases, however, *diarrhœa* is the most permanent symptom, except where the inflammation is confined to the upper portions of the small intestines; when there even constipation may be present. The nature of the discharges varies from usual diarrhœic stools in mild cases to watery, acrid, undigested, slimy, and even bloody evacuations in severe ones. So, the frequency of stools also varies according to the degree of severity of the case. These evacuations are usually preceded by sharp, cutting pains in the abdomen, which subside after each evacuation. Severe cases are attended with fever, headache, delirium, want of appetite, sickness of the stomach, and thick-coated tongue.

Secondary catarrh of the intestines, according to its seat, presents the same symptoms, but modified by its connection with the original affection and sometimes disguised by it. That which ensues in consequence of severe external burns, according to Curling, usually sets in at or about the tenth day after the injury had taken place, and is characterized by a sharp pain in the epigastrium and towards the region under the right ribs, and sometimes by a severe diarrhœa.

In most books we find a chapter on "*Enteritis*," or *inflammation of the bowels*. This term is too wide. It embraces what we have to diagnosticate specially, as dysentery; ulceration of the bowels; peritonitis; in fact, any inflammatory affection of the bowels; and is, therefore, worth about as much as the enchanting term "*liver complaint*," which may, indeed, satisfy many an ignorant patient and perhaps also many an ignorant physician.

Therapeutic Hints.

Acon., after checked perspiration; frequent, scanty, and loose stools, with tenesmus.

Ant. cr., from disordered stomach; white tongue; watery discharges.

Arsen., after chilling the stomach by taking cold substances; painful or painless diarrhœa; worse about midnight; sudden prostration and great thirst; also diarrhœa in consequence of severe external burns.

Bryon., when the weather changes suddenly to warm in the summer season; after eating fruit, sour-krout; after vexation and anger; painful diarrhœa, worse from motion and in the morning.

Calc. c., during dentition, with vomiting and diarrhœa, which is generally worse in the after part of the day.

Cham., painful diarrhœa of little children; they draw their limbs up; their belly is bloated, hard; the discharges are watery, or greenish and slimy, or undigested, looking like chopped eggs; there is rumbling in the bowels, and soreness of the anus.

China, frothy diarrhœa, generally painless; after sour beer; with a great deal of fermentation in the bowels; worse after eating, and in the night.

Collinsonia, diarrhœa of children, accompanied with colic, cramps, flatulence, &c.

Cornus circinata, dark and bilious stools, with griping and tenesmus; general debility and nervous excitability; chilliness, followed by flushes of heat and sweat.

Crot. tigl., suddenly gushing out of watery substances.

Dulc., when the weather changes suddenly to cold; cold, chilly feeling in the small of the back; griping in the region of the navel, with nausea in the stomach.

Ferr., painless, large, watery discharges, with a good appetite.

Ipec., diarrhœa and vomiting during dentition; in consequence of eating sweet, fat, or sour things, (raisins, pound-cakes, pastry, salad, &c.;) accompanied by pain in the bowels; paleness of the face; cold extremities; even spasms.

Iris vers., burning in the rectum and anus after a passage; painful, green discharges; periodical spells of diarrhœa, always at night about two or three o'clock.

Leptandra virg., profuse, watery stools, *followed* by severe cutting pains in the small intestines; after exposure to wet, damp weather.

Merc., great straining, cannot get done; discharges slimy, green or bloody; from taking cold; worse in the evening.

Nux v., always after previous use of quack medicines, teas, laudanum, brandy, lavender, peppermint, &c.

Podoph., diarrhœa, which changes constantly in appearance, now green, now yellowish, now whitish, slimy, &c.; always worse in the morning.

Puls., chilliness; thirstlessness; bitter taste in the mouth; coated tongue; diarrhœa worse at night; disordered stomach; nausea.

Rheum, during dentition; the whole child smells sour; sour discharges, green, brown, fermented; great pain in bowels and crying; pain worse at once from uncovering an arm or leg.

Rhus t., great pain in the bowels before evacuation, which is green-

ish, and contains jelly-like globules or flakes; worse in the night, or when keeping quiet.

Rumex, diarrhœa in the morning, with cough from tickling in the throat-pit.

Sulphur, either without pain or with straining; always worse in the morning; driving out of bed; excoriating the anus.

Veratr., in summer season with vomiting, coming on suddenly at night, generally painless; white.

Chronic Intestinal Catarrh.

Its pathological features differ much from those of the acute form. The mucous membrane of the intestines appears livid, brownish-red, or gray, slate-colored; it is thickened and swollen; its follicles are hypertrophied, and the whole surface is covered with a tough, grayish, sometimes transparent and jelly-like slime. Sometimes all the coats of the intestines are hypertrophied, and polypous excrescences are frequently found upon it. Sometimes the mucous membrane appears pale, anæmic, and the submucous cellular tissue is infiltrated with serum. It is usually diffused over long tracts of the canal, but may be confined to the lower part of the small intestines or to portions of the colon.

This form develops itself either in consequence of repeated acute attacks, or is a concomitant of various other complaints, like cancer, tuberculosis, typhus, obstructed circulation in the vena porta, cirrhosis of the liver, organic diseases of the heart and lungs. Its *symptoms* are the following:

1. *Diarrhœa* or *constipation*, frequently in alternation. The diarrhœic stools consist mostly of thin, fecal matter of all colors and consistencies mixed with considerable quantities of slimy, jelly-like matter. The hard evacuations are always covered with tough or jelly-like phlegm.

2. *Copious development of gas* in the bowels, which causes partial or general distention of the abdomen and great distress to the patient. Its passing off gives great relief, and for that reason the patients make much account of it.

3. *Hypochondriacal mood.* Such patients do not think or speak of any thing but their own sufferings; tormenting everybody with the same sorrowful tale.

4. *Gradual emaciation,* and, in severe cases, sinking in of the

abdomen, in which the thickened intestines can be felt through the abdominal walls.

As regards its *location*, we may conceive the inflammation as situated, 1. *In the upper part of the small intestines*, if the patient complains of a dull pain in the middle of the abdomen and constipation; 2. *In the lower part of the small intestines*—the *ileum*—if it is attended with greenish yellow, or yellowish-gray, watery stools, which, when left standing, form a sediment; 3. *In the large intestines*, if the evacuation contains large quantities of slime or pus mixed with blood, and is attended with a great deal of tenesmus.

Therapeutic Hints.

Arg. nitr., diarrhœa, worse at night; watery, slimy; always after drinking, or eating soup, immediate discharge from the bowels, as though the fluid were rolling through without stopping; soreness and burning in the region of the sigmoid flexure; fever; emaciation.

Arsen., worse about midnight; burning pain in the abdomen; discharges burning; cadaverous smelling; excoriating the anus; thin, lumpy, of all colors; great thirst; restlessness; exhaustion and emaciation; old look in the face; very cross and despondent.

Bryon., pain in the bowels after eating or drinking; slightest motion brings on a discharge which looks like dirty water, showing, on standing, a whitish, finely-granulated sediment of undigested food at the bottom of the vessel.

Calc. c., during dentition; scrofulous individuals; diarrhœa, worse towards evening; whitish, chronic soft stools; emaciation.

Carbo veg., great collection of wind in the abdomen; frequent discharge of very fetid flatus without relief; stool, even if it is soft, is passed with great difficulty.

Cocculus, diarrhœa only through the day, thin, yellowish, without pain; great rumbling in the bowels; hectic fever; general emaciation.

Coloc., chronic diarrhœa in the morning; watery; with pain in the sides of the abdomen.

Crot. tigl., diarrhœa, with nausea; watery discharges gushing out forcibly; worse after drinking, and in the summer season.

Gelsem., when diarrhœa is always brought on by exciting news, fright or emotions of the mind.

Graphites, a quantity of white mucus is expelled with the stool.

Gutti, pain in ileo-cæcal region, which is sensitive to the touch; discharges watery, slimy, undigested, without smell; during stool,

bearing down and colicky pain, prolapsus ani, and cold sweat on the limbs.

Lachesis, ileo-cæcal region very sensitive to touch; after great straining, discharge of a mass of croupous exudation; stools very offensive.

Merc., discharge mostly slimy and with straining; worse towards evening and in the night; gums swollen; teeth loose; sickly smell from the mouth; the mere putting the hands upon something cold causes pain in the bowels; debility; sweat without relief.

Natr. m., diarrhœa mostly through the day; greenish, bloody; or watery; perceptible falling away in flesh on the neck; the neck becomes quite thin.

Nitr. ac., acute pain in the abdomen during stool; worse in the morning; discharge brown and slimy.

Petrol., slimy discharge; pain in the bowels; disgust for meat, especially fat; bitter-sour taste in the mouth; cold feeling in the abdomen.

Phos., painless, watery discharges; especially in the morning after getting up; in debilitated, consumptive patients; lying-in women, &c.; burning of the palms of the hands; great weakness; emaciation.

Phos. ac., painless, watery discharges, with great rumbling in the bowels; during cholera epidemics.

Sepia, jelly-like stools, with colic; debilitating diarrhœa; worse after eating milk; the whole aspect of the patient indicates a deep-seated disturbance in the digestive functions.

Sulph., diarrhœa; worse in the night or early in the morning; stools yellow or brownish or greenish, mixed with blood, slime or pus; feces pass off whilst the patient intends to relieve himself of flatus; the abdomen is sore to the touch; during stool, pain in the small of the back; palpitation of the heart; congestion of the head; prolapsus ani; itching, burning, smarting in the anus and rectum.

Frequent alternation of costiveness with diarrhœa suggests: Ant. cr., **Arg. nitr.**, Ars., Bry., Graph., Natr. m., Phos., Rhus t., Ruta, Sepia.

Copious development of gas: Carbo veg., Cocc., Graph., Nitr. ac., Phos., Puls.

The patients think and talk of nothing but their ailments: Ars., Calc. c., Cocc., Merc., Nitr. ac., Phos., Sepia, Sulph.

Emaciation and sinking in of the abdomen: Ars., Borax, Calc. c., China, Ferr., Graph., Jod., Lach., Lyc., Natr. m., Nitr. ac., Nux v., Phos., Phos. ac., Puls., Silic., Staph., Sulph., Ver.

Typhlitis, Perityphlitis and Inflammation of the Vermiform Process.

Although, anatomically speaking, these are three distinct forms of diseases, yet, considering them in a diagnostic point of view, their symptoms during life are so intimately interwoven, that a differential diagnosis among them is rarely possible.

Typhlitis is an inflammation or catarrh of the mucous membrane of the cæcum, in consequence either of cold or accumulation of hardened feces or foreign bodies, like cherry-stones, plum-stones and the like. It may spread over a considerable portion of the colon ascendens, and to the vermiform process; it may spread to the muscular layer of the gut; cause ulceration and even perforation of these parts, and end with peritonitis, inflammation of the loose areolar tissue around the cæcum, and formation of abscesses in the right iliac fossa.

Perityphlitis is an inflammation of the loose areolar tissue around the cæcum, either, as we have seen, in consequence of typhlitis or starting here independently. It ends, if not checked, in formation of abscesses in the right iliac fossa, which either discharge into the neighboring viscera or break through the abdominal parietes, mostly in the neighborhood of Poupart's ligament. As such abscesses, if not originally caused by perforation of the cæcum from within, mostly perforate the posterior wall of this organ, it is now and then the case that the abscess, when it discharges exteriorly, contains, also, fecal matter.

Inflammation of the appendix vermiformis may be caused, like typhlitis, by hardened fecal matter or foreign bodies. It ends either in obliteration of this process, or, when its opening gets closed, in an accumulation of a slimy, serous fluid, by which its walls become distended, forming the so-called dropsy of the appendix, or it ends in formation of abscesses in the right iliac fossa, or, lastly, in more or less extended peritonitis.

The *symptoms* of these three pathological states we may sum up under the following heads:

1. *External swelling.* It makes its appearance in the right ileo-cæcal or ileo-inguinal region of the abdomen. It is felt directly under the abdominal wall, which is movable upon it, except in such cases where a perforation to the outside is going to take place, and exhibits in most cases considerable heat and redness. The swelling itself is immovable, its surface feels smooth, and its consistency varies in de-

gree; it may reach sometimes the hardness of a stone; fluctuation is seldom perceptible. Its growth is rapid; in a few days it reaches its height. This swelling is wanting only in such cases in which perforation takes place, before yet exudation and pus formation could take place around the cæcum, and it is not perceptible or at least not distinctly so, when, in consequence of peritonitis, the fluid exudation or meteorismus of the neighboring intestines covers it over.

2. *Pain.* It usually commences suddenly; is of a sharp, lancinating or boring nature, and increases on motion, especially such which put either the abdominal or the psoas muscle on a stretch. It is worse from touch, and confined either to the right iliac fossa alone or extending over a larger surface in accordance with the extension of the inflammation.

3. *Obstinate constipation*, which may last for weeks, although interrupted sometimes

4. *By an intercurrent diarrhœa of a slimy, watery substance.* Such diarrhœa, however, is no favorable sign; only fecal discharges afford relief.

5. *Vomiting* may take place at any stage of the disease, but does so most frequently at its height. In some cases it is very violent, 10–12 times a day, is at first of a watery, yellowish or greenish fluid, which, however, as the disease progresses, and the constipation continues, assumes a stercoraceous smell, until, by the continued antiperistaltic motion of the intestines, the contents of the smaller intestines are forced back into the stomach, whence they are thrown up, affording temporary relief to the patient.

6. *Belching and meteoristic distention of the stomach and upper part of the abdomen.*

7. *Singultus* or *hiccough* is a frequent sign, and very distressing to the patient, preventing all rest and sleep.

8. *Pain in the genitals, erections of the penis, drawing up of the testicles, difficulty in urinating, numbness of the right leg,* are consequences of the swelling, pressing upon the corresponding nerves; whilst

9. *The œdematous swelling of the right* leg is the consequence of its pressure upon the crural and iliacal veins. Such a desperate condition of things must necessarily involve the whole system

10. *In fever,* which is more or less violent according to the extent of the inflammation.

Differential Diagnosis.

It may be confounded with

1. *Abscesses of the psoas muscle.* But in this affection the swelling

lies deeper, nearer Poupart's ligament, and more towards the middle line of the abdomen. It makes any motion with the right leg, which is always held in a bent position, impossible; it leaves the action of the bowels undisturbed; it is associated with caries of the vertebræ or bones of the pelvis. Pus, when discharged through the abdominal walls, has no fecal odor.

2. *Tumors or abscesses of the right kidney* cause the main part of the swelling to appear in the loin, or above the anterior termination of the crest of the ilium. There is no disturbance in the action of the bowels, but the urine contains pus, bloody gravel, pointing at once to a diseased state of the kidneys.

3. *Tumors of the right ovary* are attended with menstrual disturbance, but not with affections of the bowels; they grow slowly, and from below out of the pelvis, where they may be discovered by a per vaginam examination.

4. *Cancer of the cæcum* is a very rare disease; of very slow growth; and attended with all the general signs of cancerous diathesis.

5. *Intussusception or invagination of the intestine* may be sometimes very difficult to discern from the typhlitis, especially if it should happen to cause a swelling just in the right iliac region; but this is not always the case; and, furthermore, it is preceded by diarrhœa. As soon, however, as invagination has taken place, there are only bloody, slimy discharges; the obstruction of the intestinal canal with all its symptoms—stercoraceous vomiting, hiccough, &c.—is at once established, whilst in typhlitis it sets in only during the further progress of the disease.

Therapeutic Hints.

Bellad., great pain in the ilio-cæcal region, cannot bear the slightest touch, not even the bed-cover; nausea; vomiting; necessity of lying motionless on his back; high fever.

Ginseng, stinging pain and swelling and gurgling noise in the ilio-cæcal region; dry tongue; heat and delirium when going to sleep.

Hepar, after the abuse of mercury; ilio-cæcal region swollen, deep, in a circumscribed lump; lying on the back with the right knee drawn up, as easiest position; frequent urging to stool and urination.

Lach., great sensitiveness to contact of the abdomen; swelling in the ilio-cæcal region; painful stiffness from the loins down to the os sacrum and thighs; constipation; scanty urine, with red sediment; strangury; only possible position is that on the back, with the knees drawn up.

Merc., painful, hard, hot, and red swelling in the ilio-cæcal region, painful to the touch; face red and pale, sickly; thirst; red, dry tongue; constipation.

Plumb., large, hard swelling in the ilio-cæcal region, painful to the touch and least motion; or when sneezing and coughing; the whole abdomen sensitive; the navel drawn in; frequent sour belching; nausea; retching; constipation; anxious countenance; dry tongue, red on the edges, brown coating in the middle; great thirst, lame feeling in the legs.

Rhus t., hard, painful swelling of nearly the entire right side of the abdomen; pain worse in sitting, or when stretching the right leg; impossibility of lying on the left side; better when lying on the back with right leg drawn up; and when gently pressing the swelling from below upwards; pale, anxious face; burning of the palms of the hands; profuse sweat at night; small, frequent pulse.

Thuya, only those parts of the body perspire which are uncovered, those covered are hot and dry.

Besides these compare Arsen., Cham., Cocc., Coloc., Lyc., Nitr. ac., Amm., Plat., Silic., Sul., Ver., Zinc.

Stercoraceous smell of the vomit hints to Opium, Merc., Plumb.

Already formed abscess in the right iliac fossa indicates Hepar, Merc., Silic., Jod. ac., Lach., Kali c., Lyc.

Proctitis, *Catarrhal Inflammation of the Rectum.*

This is either of an *acute* or a *chronic* nature; and its pathological appearance corresponds entirely to catarrhal inflammation of any other mucous membrane; exhibiting injected vessels; swelling; later, secretion, and by-and-by thickening of the membrane, which, in the rectum, may even result in polypus-like excrescences. It may originate in taking cold, purgative medicines, medicated injections, insertion of pieces of soap to promote an evacuation; worms, and hard fecal matter.

It may, *secondarily*, accompany tubercular, cancerous or syphilitic ulcers; inflammation of neighboring organs, such as the bladder, prostatic gland, internal sexual organs, and such disorders as cause a stagnation in the abdominal veins in general, like diseases of the liver, vena porta, heart and lungs, hemorrhoidal veins.

Its *symptoms* are: *pain*, tearing, stinging, throbbing, burning; worst during an evacuation; constant desire to evacuate; tenesmus; in severe cases, attended with retention of urine; painful urination or drippling of urine, erection of penis; drawing up of testicles; leucorrhœa.

The bowels are mostly constipated, but the stools natural; covered however, with a thin layer of slime, which is colorless or tinged with blood. The great straining frequently causes prolapsus ani. In its *chronic* form the pain is more of a dull, heavy nature, and its most prominent symptom is the constant discharge of a thick, yellowish, even purulent secretion from the mucous membrane of the rectum. It covers either the natural discharges from the bowels, or it is mixed with the loose stools, (if there be such,) and oozes out of the anus constantly, staining the linen of the patient. This chronic form is frequently attended with chronic catarrh of the bladder, the uterus, and vagina, and especially with *hemorrhoidal* affections.

Therapeutic Hints.—In ordinary acute cases there will be indicated either Acon., Bell., Nux v., or Sulphur.

Where there is tenesmus in the rectum and bladder at the same time: Alum., **Aloe, Caps., Hyos., Lyc.,** Natr. c.

During stool, discharge of urine impossible: China, Merc. subl.; during stool, erections of penis: Thuya, Ign.; during stool, discharge of leucorrhœa: Thuya, Zinc., Magn. m.

Drippling of urine: Arg. nitr., Bry., Calc. c., Lach., Lyc., Natr. c., Petrol., Rhod., Staph., Silic., Thuya.

Slimy, purulent matter oozing out of the anus: Borax, Sepia, Thuya.

Prolapsus ani: Nux v., Sulph., Calc. c., Lyc., Bell., Ign.

Polypi recti: Calc. c., Calc. phos., Phos., Silic., Thuya.

Periproctitis

Corresponds entirely with Perityphlitis, being an inflammation of the areolar tissue around the rectum.

Primarily it is of very rare occurrence, but may be brought on by traumatic conditions of the anal region; by falls, bruises, riding on horseback, surgical operations; from taking cold.

Secondarily, however, it is much more frequent, and may be a mere continuation of inflammatory and ulcerative processes in the rectum, or other neighboring organs; the pelvic bones, the prostate gland, the bladder, the uterus; sometimes, however, it appears as part of a general tubercular process and puerperal inflammation, without any ulcers in the rectum.

Its most important *symptoms* are:

1. *A swelling and hardness around and about the rectum*, which ap-

pears either back of the anus in the coccygeal space, or in front of it, in the perineal region. Sometimes, however, nothing is seen or felt exteriorly, the swelling being higher up; and an examination per anum, by which it might be detected, is so painful to the patient that it is seldom practicable.

2. In the course of ten or twelve days, however, the hard swelling is converted into *an abscess*, which breaks either outside, in the above named regions, or perforates the rectum, and discharges through the anus. In rare cases only, does a perforation take place into the bladder, the vagina, the uterus, or into any other part of the intestines. The first is the most favorable. After discharging itself fully it heals, and nothing is left. Perforation of the rectum, however, frequently causes fistula; and perforations into any of the other organs are still more serious in their nature.

3. The *pain* is mostly of a dull, heavy kind, or darting in the region of the rectum; worse in sitting and walking. Sometimes it is throbbing; and when shaking chills set in, it is a certain sign that formation of pus is taking place. There is also frequently tenesmus combined with it, and difficulty of voiding urine.

Therapeutic Hints.—When caused by traumatic causes—bruises, falls, riding on horseback: Arn., Con., Puls., Rhus t., Sulph. ac.

For heavy, dull, pressing pain: Bell., Ign., Nux v.

For darting, stitch-like pain: Bry., Kali c., Phos.

When the swelling is hard and inflamed: Ars., Bell., Hepar, Lach., Merc., Puls.

To bring it to a head: Ars., Calc. c., Hepar, Kreo., Lach., Lyc., Merc., Sepia, Silic.

Fistules require: Caust., Berberis, Silic.

Dysentery.

The pathological character of this affection presents the following features: it is seated exclusively in the large intestines, commencing at the valve of the cæcum, and spreading thence over the colon, exhibiting its greatest intensity in the bends of the gut, namely, at the flexura hepatica, lienalis, sigmoidea, and the rectum. When commencing, the mucous membrane appears reddened, swollen; the epithelium peels off; sometimes it is raised into little blisters by an ex-

udation beneath. Later the mucous membrane becomes covered in patches with a dirty-whitish, yellowish-gray, or yellowish-red substance; which, from the contents of the bowels, or the blood, may assume a greenish or brownish color; and which consists of decayed epithelial cells, slime, pus and blood globules. If scraped off by the knife, it discovers the mucous membrane beneath, reddened and softened; and it appears uneven in consequence of a serous infiltration into the submucous cellular tissue. The solitary follicles are swelled, and in a state of ulceration. All this causes a collection of putrid, bloody or purulent mass within the cavity of the gut. In a still higher degree of inflammation, the mucous membrane is found to be decaying away; or changed into a soft, dark mass, which is thrown off and discharged; giving rise in this way to those irregular, larger and smaller dysenteric ulcers of the colon which sometimes cause even perforation of the gut. Besides these grave destructive changes within the intestine itself, we find also more or less inflammation of the peritoneum; swelling of the mesenteric glands; hyperæmia and inflammation of the liver.

Dysentery generally prevails epidemically, when miasmatic and atmospheric conditions cause a disposition to it. It is found in camps, in hospitals, in regions where malaria prevails. Summer heat, and, in autumn, sudden cool nights are very apt to cause it. Sporadic cases we find, therefore, occur mostly after sudden check of perspiration, or after getting wet; fruit, if ripe, will scarcely ever cause it, although old women do assert it. Unripe fruit, however, is always hurtful.

Dysentery attacks all ages and both sexes. It is contagious and propagated by the evacuations, like cholera, and such things which have been soiled by it—night-chambers, injection-pipes, &c.

Symptoms.

1. *The stools*, commencing almost always as diarrhœic, change into characteristic dysenteric stools. At first we observe in the liquid diarrhœic stools jelly-like, transparent clots of slime, looking similar to boiled sago; they are dotted and streaked with blood and will sink to the bottom of the vessel if the evacuation remains standing a while. They soon increase and are discharged in larger quantities of jelly-like, transparent masses tinged with blood. As they augment, the fecal substance of the stool diminishes, until, finally, nothing but slime is discharged. By this time, however, its jelly-like character changes into an opaque, dirty-whitish, or reddish-gray appearance, like scrapings,

swimming, sometimes, in a thin, bloody, watery fluid; fecal matter disappears entirely.

The blood contained in it varies in quantity from merely tinging the slime into a reddish color to unmixed blood. In rare cases only whole shreds or pieces of slough from the lining membrane pass away; and, if the discharges assume a brownish, chocolate-like color, and are of a penetrating, cadaverous smell, it is a sign that the dysenteric ulcers within have become ichorous and the mucous membrane is decaying. When, however, fecal matter again makes its appearance, which generally takes place in the shape of hard lumps, it has always been to me a sign that the inflammation is gradually subsiding; and, although after it many more evacuations of mere bloody slime may take place, yet the violence of the disease seems broken; there is, after that, less and less slime discharged, until, at length, normal alvine discharges prove the restoration to health.

The frequency of stools varies from four to twenty or thirty in the course of twenty-four hours; sometimes even more. The smell of the evacuations varies also. At first, as long as fecal matter is contained therein, the smell is, accordingly, stercoraceous; later, when the fecal matter has disappeared, there is either no smell, or a peculiar, fleshy, sweatish, nauseating odor. When, however, the disease is at its height, and the dysenteric ulcers become ichorous and sloughing, the smell is awful, penetrating, cadaverous.

2. *Pain in the bowels and tenesmus.* Characteristic of dysentery is the *colicky, cutting and drawing together pain* in the bowels *before* and during an evacuation, ceasing soon after, to be renewed by another attack, thus coming in spells. The evacuations are generally attended by great burning pain in the anus and rectum. In fatal cases, where paralysis of the colon takes place, the pain ceases altogether. Likewise characteristic is the tenesmus or straining during an evacuation, and continuing some time after; although not more than a teaspoonful be voided. It is the most painful symptom of the disease, and may cause fainting, convulsions and prolapsus ani. This symptom also ceases if, in fatal cases, paralysis of the colon takes place.

3. *Reflex symptoms.* To these belong the *vomiting* frequently found at the beginning, but also during the progress of the disease; singultus, (which, however, is not so frequent, and then is generally a sign of peritonitis,) *retention of urine and painful micturition.*

4. *General symptoms* are, *more or less fever*, but the temperature of the skin is generally not as high as in most other inflammatory dis-

eases. The skin is usually dry. There is great thirst; little appetite, great loss of flesh.

5. *Secondary* symptoms are, peritonitis, perityphlitis, periproctitis, pneumonia, pleuritis, parotitis, splenitis, hepatitis, erysipelas, hemorrhages, decubitus.

6. *Unfavorable symptoms* are, copious hemorrhages, ichorous, chocolate-colored and cadaverous-smelling discharges; great prostration of strength; great frequency and smallness of pulse; cold skin; cold sticky perspiration; livid and cyanotic face; collapsed abdomen, with want of elasticity of its walls; paralysis of the sphincter ani, so that the anus remains open; involuntary discharges; peritonitis; perforation of the colon; shaking chills; erysipelas; violent vomiting, with cholera-like symptoms; obstinate singultus; delirium; convulsions and paralysis.

Therapeutic Hints.

Acon., after sudden check of perspiration; chill, high fever and dry skin; first very frequent, small, brown, painful, and at last bloody discharges.

Aloes, violent tenesmus; frequent stools of bloody water; during stool, fainting or screaming on account of violent pains in the abdomen; hunger; great rumbling along the colon; with the stools escape large quantities of flatus; pains in the small of the back; when urinating urging to stool.

Apis, great tenesmus, and feeling as though the intestines were bruised.

Arsen., discharges have a fetid, foul smell; consist of fluid feces mixed with blood, chocolate-colored; most frequent about midnight; *before stool*, torturing sensation, as though the abdomen were being constricted; *at the stool*, a feeling of contraction in the rectum; *after stool*, burning in rectum and anus; trembling in all the limbs; palpitation of the heart and distention of the abdomen; tenesmus with burning in the anus and rectum; great exhaustion, and, lastly, some short relief from pain; great thirst, but drinking little at a time; tongue white or brown or bluish; nausea; vomiting; face sunken, expressing great anguish; great restlessness; petechial, miliary and nettle-rash eruptions; cold dry skin, or else cold perspiration; very frequent, weak pulse; fetid urine.

Baptisia, violent, colic-like pains *before* every stool and great tenesmus; discharges of pure blood, with very little mucus.

Bell., discharges greenish, slimy, bloody, with great tenemus; bearing down and shuddering; afterwards burning in the anus and rectum;

the mucous membrane of the anus appears swollen and pressed out; urine suppressed; abdomen very sore to pressure; cutting, tearing and constrictive pains in the abdomen, so violent that the patient screams out; thirst, belching, vomiting; starting in sleep; delirium.

Bryon., during summer-heat; pain and discharges are brought on from motion, even from turning in bed.

Canth., tremendous burning pain through the whole intestinal tract, from the bowels down to the anus, with painful sensitiveness of the abdomen to the slightest touch; unquenchable thirst, with disgust for all kinds of drink; loss of epithelium on the lips, tongue and palate; vesicles and cankers in mouth and throat; collapse, small pulse, coldness of hands and feet.

Caps., abdomen distended, as though it would burst; very frequent discharges, with violent tenesmus and burning both in the rectum and bladder; thirst after stool, and shuddering after drinking; taste like putrid water; pains aggravated by currents of air, though warm.

Carbo v., after Arsen., if there be cold breath; cool skin; terribly smelling discharges; general collapse.

China, discharges chocolate-colored, of a terrible, cadaverous smell; worse at night; great general exhaustion.

Colchicum, discharges of white, jelly-like or bloody mucus; spasm of the sphincter ani during a discharge, with a shuddering over the back; such spasms occur also without a discharge; œdema of the lower extremities, which are cold; ascites; urine dark-brown and scanty.

Colocynth., discharges slimy, bloody, like scrapings; abdomen bloated; violent pain in the abdomen, as though the intestines were squeezed between stones, which compels the patient to bend double; from the abdomen rises a shuddering over the body; during stool, sometimes tenesmus, at other times not; after stool relief of the pain.

Erigeron, stools small, streaked with blood, accompanied with tormina; burning in the bowels and rectum; hard lumps of feces mixed with the discharges; urination painful or suppressed.

Hamam., when the amount of blood is unusual in quantity and amounts to an actual hemorrhage; it is generally dark; in small clots or patches scattered through the mucus.

Ipec., when caused by eating unripe, sour fruit; great disgust and loathing of any sort of food; sickness and vomiting; coated tongue; headache; chilliness; great pressing to stool; voiding slimy, bloody, offensive discharges, with subsequent tenesmus; worse in the evening.

Kali bichr., discharges brownish, frothy water, bloody, with gnawing

pain about the umbilicus; violent painful pressing, straining and tenesmus; tongue smooth, red and cracked.

Laches., discharges chocolate-colored, of a cadaverous smell; during evacuation burning in the anus; cramp-like pain in abdomen; coldness; thirst; abdomen very hot; tongue red and cracked at its point, or black and bloody.

Merc., discharges excoriating; *before stool:* cutting, pinching, and twisting pains in the abdomen; anxiety and trembling; *during stool:* burning in the anus; eructation, nausea; faintness, colic, heat and perspiration; *after stool:* great tenesmus; cannot get done; prolapsus ani and trembling; the abdomen generally feels cold; bad taste in the mouth; saltish saliva; rheumatic pains in the limbs; all worse at night.

Merc. subl., with almost constant cutting pains in the abdomen, and intolerable, painful, almost ineffectual, pressing, straining and tenesmus; frequent, scanty discharges of bloody slime, day and night, with *great tenesmus of the bladder.*

Nitr. ac., profuse discharges of blood; *before stool:* colic; *during stool:* spasmodic contraction of the anus; cutting and straining in the anus and rectum; *after stool:* burning in the anus; ineffectual straining; colic; exhaustion; anxiety and general uneasiness.

Nux v., always after previous abuse of diarrhœa mixtures; pain in the abdomen before and during a discharge, with tenesmus, relieved *after stool;* pressing pain in the back, as if broken; sickness in the stomach

Puls., discharges white-slimy; whitish-coated tongue; pappy, sticky taste in the mouth, without thirst; great difficulty in breathing; all worse at night.

Rhus t., discharges jelly-like; pains in the abdomen and limbs, worse when lying still, better from moving about; nocturnal exacerbation; after getting wet.

Staphis., cutting pain before and after stool; tenesmus in rectum and bladder during stool; always worse after drinking cold water.

Sulphur, when other remedies shall have acted favorably, but only for a short time; when, during stool, burning; cutting; pressing and prolapsus recti; cutting in urethra; catching of breath; palpitation; chills about the lower part of the body; and afterwards, straining and throbbing in the rectum; bruised pains and pinching in the abdomen; chills and lassitude.

Cholera.

Its pathological changes, so far as they belong to the intestinal canal, are as follows: The serous lining of the intestines is sometimes covered with a thin and tough exudation. The small intestine is flabby; its serous lining, in consequence of a capillary hyperæmia, appears pinkish; its mucous membrane is injected, and the solitary as well as Peyer's glands are swelled, and filled with serum or solid exudation. The small intestine is generally found filled with a rice-water fluid, or its walls are lined by a thickish paste-like substance. Its coats are œdematous, swollen. The villi—those minute projecting papillæ which are so abundant as to give to the entire surface a beautiful velvety appearance—have lost their epithelium, so that the surface of the mucous membrane appears raw or skinned. The large intestines present no characteristic change.

I shall try now to explain upon this ground, according to *Niemeyer*, the whole row of fearful changes which the entire system undergoes by this dreadful malady.

Out of the villi, which are denuded of their natural protection, takes place a constant copious transudation of serum into the gut, therefore the *rice-water discharges* upward and downward, by which cholera is characterized; but being deprived of their epithelium, these villi lose their capability of absorbing the fluid which the patient takes as drink; consequently the patient constantly *loses* fluids, but *gains none.* The next natural consequence of this must be, *that the blood becomes dark and thick;* in later stages, even *black, tarry, ropy, semi-coagulated.* Thus the blood, deprived of its natural amount of water, seeks for fresh fluid supply, and absorbs all the water contained everywhere in the tissues; in consequence of which, all the tissues become dry and reduced in volume; *the nose becomes pointed; the cheeks fall in; the eyeballs sink back* into their orbits; the skin *wrinkles* on the fingers like washerwomen's, and remains as a fold, wherever pinched; and even *pathological exudations,* which had resisted all medication—for example, serous exudations of the pleural cavities, or within the synovial membranes of the joints—are completely absorbed; and moist eruptions and ulcers become dry like parchment. And further, it explains the cessation of all natural secretions, as saliva, tears, sweat, urine, and bile; simply because there is nothing more contained in the blood to be secreted.

Another consequence of the blood constantly losing its watery constituents is this: the circulation of the capillaries becomes impaired,

if not entirely prevented. As soon, however, as this takes place in the capillaries of the heart-muscle, it causes, according to physiological and pathological experience, a paresis of the heart; and *thus that characteristic feebleness and faintness of the heart's impulses and sounds*, and the small, feeble, faint pulse of the radial and carotid arteries, in cholera; thus, also, the *cyanotic symptoms;* the *blueness of the skin everywhere; the blue tongue*, by which severe cases of cholera are characterized.

On the same condition of the blood, also, depends that *anguish for breath* and *hunger for air*—that deep inspiration and short moaning expiration—which is always present in severe cases of cholera; for, in order that free expiration be possible, it is necessary, not only that there should be a free admission of air into the air-cells, but also that a corresponding change of blood in the capillaries of the lungs should constantly be going on. A retardation of this flow causes an imperfect purification of the blood from its carbonic acid gas; which fact can be demonstrated by an analysis of the exhaled air, which contains less carbonic acid gas than it does normally. The air passes out nearly unchanged, causing thus the characteristic *cold breath* of cholera patients. And as the vocal organs partake of the universal drying process, they become rigid, and naturally cause the voice of the patient to become changed into the peculiar *cholera-voice, which is rough and coarse, with imperfect articulation.*

There is one more characteristic symptom of cholera—*the tonic spasms or cramps, which contract the muscles into hard, round knobs.* These are extremely painful. As they are doubtless caused by central irritation, it is quite probable that this irritation originates in the same drying-out process which pervades the whole system. Thus I have given a true picture of genuine Asiatic cholera; all its characteristic features being necessary consequences of its pathological character.

It is caused by a poison, the nature of which we do not know, and which causes the disease to spread over whole countries; hence its name, "*cholera epidemica.*" It is called *Asiatic* cholera, because it first appeared in that quarter of the globe.

The disease is of a most violent character, destroying life quickly. Its mortality is fearful! The virtues of Homœopathy alone have rendered it less fatal. If recovery takes place, all the symptoms may, by a perfect reaction of the system, be speedily extinct; but in case of imperfect reaction, the disease changes into a kind of *typhoid fever*, which is sometimes complicated with different local inflammatory

symptoms, as pneumonia, pleuritis, bronchitis, parotitis, splenitis, or diphtheritic exudations in the pharynx, intestines, vagina and bladder, so that even if the patient lives through the attack of cholera itself, he may be carried off by its consecutive symptoms.

Therapeutic Hints.—The best prophylactic is no doubt *Sulphur*, as recommended by Dr. Hering in his Domestic Physician. Take fine precipitated Sulphur, (milk of Sulphur,) sprinkle about half a teaspoonful of it into each stocking, boot or shoe, (whatever you wear;) repeat about twice a week. Further, as stagnation in the capillary circulation of lungs and heart ensues, it is of the highest importance that the patient should be urged from the beginning to breathe as deeply as possible, in order to keep up a lively circulation—feeding the blood with as much oxygen as possible. For the same reasons the best drinks which could be offered to such patients might be *oxygenized water.* In England this article is already in market.

As there is, before and during an epidemic of this kind, generally a prevalence of bowel complaints, (cholerine,) it is quite important that these incipient symptoms should be at once attended to. We shall frequently find indicated:

Asarum europæum, in nervous and timid persons, who constantly feel chilly, or complain of cold hands, feet, knees or abdomen, even the hottest room or warmest covering does not relieve this chilly feeling; constant nausea, with loss of appetite or loathing of food without any gastric derangement; perfectly clear tongue; rumbling and gurgling in the abdomen, likewise attended with nausea.

Bryon., diarrhœa in the morning after getting up, with previous cutting pains in the bowels.

Coloc., bloody diarrhœa, with violent pain in the bowels, extending down into the thighs.

Ipec., nausea and vomiting predominating *without*, or at least always *previous* to, an alvine discharge.

Iris vers., violent pain at the pit of the stomach or around the navel, or in some cases still lower down in the abdominal region, at or before every fit of vomiting and purging.

Merc., bloody, slimy discharges, with tenesmus.

Phos. ac., especially in the summer season; painless, watery discharges; great rumbling in the abdomen; bloatedness; sticky tongue.

Secale, painless diarrhœa, with tingling and numbness in the limbs.

Veratr., diarrhœa, and vomiting of a turbid water, with cold perspiration on the forehead.

The developed cholera may point to one of the following remedies.

Camphora, Hahnemann's discovery; he says: "When cholera first makes its appearance, it usually attacks in the following way: great prostration at once; the patient cannot stand; his features become distorted; his eyes sunken; his face and hands bluish and icy cold, with coldness of the remaining parts of the body; his features express despair, and his whole action anguish, as though he would suffocate; half-stupid and senseless, he moans and groans in a hoarse, husky voice, expressing nothing particular, unless questioned. He has burning in the stomach and œsophagus, and cramps in the calves of the legs and in other muscles; when touched in the pit of the stomach he screams out; he has no thirst, no nausea, no vomiting, no diarrhœa. In such cases Camphor gives immediate relief; one drop of the tincture on sugar every five minutes." These observations of Hahnemann have been verified since by hundreds of physicians, and in thousands of cases.

As additional symptoms I might mention: vertigo, nausea, vomiting, with cold perspiration, especially in the face; faintness, asphyxia; cramps everywhere; the upper lip is drawn up, exposing the upper teeth. It is also recommended after previous use of allopathic medicine. Its beneficial action is seen in a gradual glow and warm perspiration all over the body; when of course its use must be discontinued. Overdosing calls for Coffea.

Next to Camphor in frequency of its use stands—

Ver. alb., anguish; fear of death, or indifference; vertigo; eyes sunken; nose cold; face cold, pale, distorted, bluish, bloated; great thirst for cold water, and *vomiting after drinking*, with great debility or diarrhœa at the same time; *the discharges are gushing, profuse, rice-water-like,* with cramps and colic in the bowels; cold feeling in the abdomen; tongue pale or bluish; dry or yellow-coated; cold; voice feeble and husky; very anxious oppression and constriction of the chest; tonic cramps commencing in hands and feet, gradually spreading all over; pulse very small, thread-like; coldness all over; cold perspiration.

Cuprum. Hahnemann says: "If, after Camphor, there should not soon be a change for the better, apply at once Cuprum X." Its sphere of action is the following: very painful clonic spasms in different parts of the body, so that the patient cries out; great pressure in the pit of the stomach, worse from contact; constriction of the

chest; great thirst; for a while after drinking cold water vomiting and diarrhœa not very prominent; anxiety; cold face; blue lips; coldness all over; skin inelastic; urine suppressed.

Besides these compare the following remedies:

Argent. nitr., during the height of the disease, when the respiratory muscles are attacked with spasms, so that the patient can scarcely breathe, neither speak; to drink a swallow of water, or the approach of a handkerchief to the nose, causes a feeling of suffocation, with terrible anxiety and thoughts of self-destruction; during the oppression severe stitches in the pit of the stomach; after taking any fluid it appears as though it were running straight through the intestinal canal without stopping.

Arsen., great anguish, indescribable, with constant restlessness; fear of death; sudden prostration; eyes sunken; nose pointed; face pale, cold, distorted; tongue dry, brown, or black; excessive thirst for cold water, but drinking little at a time, which is immediately thrown up; violent burning in the stomach and bowels, worse after throwing up; urine suppressed; voice hoarse; great oppression and constriction of the chest; skin wrinkled, dry, cold, blue; cramps clonic and tonic in different localities; cold, sticky perspiration. May be indicated in all stages of the disease; best sign of its proper choice is the reappearing of urinary secretion.

Carbo veg., in last stage; when already the discharges, up and down, the cramps, and general reaction have ceased; when the patient lies in a sopor, and is pulseless, with cold breath, cold tongue, or coldness all over, a picture of perfect collapse.

Cicuta, violent cramps; tonic spasms of the muscles of the chest; eyes turned upwards; soporous condition.

Lach., vomiting renewed by the slightest motion, and nausea attended by a great flow of saliva.

Croton tigl., gushing out of watery discharges mixed with whitish flakes, with rumbling griping in the bowels, and afterwards burning in the anus; discharges always brought on after drinking; great exhaustion; faintness, and dizziness.

Hydrocyan. ac., when there is a rapid progress of the disease towards asphyxia; marble coldness of the whole body; pulselessness; cessation of diarrhœa and vomiting; hiccough; paralysis of the œsophagus; when drinking, the fluid runs gurgling down the œsophagus; long fainting spells; trismus; tetanus.

Jatropha, violent vomiting of a whitish, jelly-like substance, resembling the white of an egg; discharges from the bowels in gushes;

gurgling noise in the abdomen, sounding as if a bottle were being emptied; cramps in the calves of the legs, drawing them flat; at the same time the mind is in a kind of ecstasy and takes little notice of these painful spasms; burning of the abdomen; belly drawn in; marble coldness of the body; pulselessness; cold, sticky perspiration.

Ipec., in light cases, where the vomiting predominates over the alvine discharges; vomiting mostly of a sour fluid, without diarrhœa.

Phos., tongue coated white; excessive thirst; vomiting after the water has become hot in the stomach; belly bloated; rumbling and rolling in the abdomen; the rice-watery evacuations contain grains like tallow; oppression; great sinking of strength.

Secale c., dizziness, deafness; painful retching; profuse diarrhœa; unsuccessful urging to urinate; skin wrinkled; tingling in the limbs; cramps and coldness; aversion to heat and being covered.

Sulphur, first recommended by Dr. Hering; diarrhœa and vomiting at the same time; wakens the patient after midnight; the body grows cold and blue, with intense cramps in the calves of the legs and soles of the feet; pain in the region of the liver.

Tabacum, cold perspiration, with constant, deadly sickness and vomiting now and then; cramps and tearing in the limbs.

Consecutive symptoms may call for—

Acon., if there be high, inflammatory fever; hard, strong pulse; congestion of the head or lungs; great restlessness; fear of death.

Bell., congestion of the head with violent delirium; visions and illusions of senses.

Bryon., typhoid symptoms; pain in all the limbs on moving.

Canth., excessive sensitiveness of the abdominal walls; burning in the umbilical region and deep in the pelvic cavity; rumbling in the abdomen and tenesmus followed by bloody evacuations; urination drop by drop, with great burning.

Mur. ac., difficult speech; moaning and groaning during sleep; sliding down in bed.

Phos. ac., indifferent; without pain; delirium; drowsiness; sopor.

Rhus tox., typhoid condition; red tip of tongue; pain in all the limbs on lying quiet.

Cholera Morbus.

The attack comes on almost always suddenly, and frequently in the middle of the night. It consists of vomiting and purging, spasmodic pain in the abdomen, sometimes cramps in the legs, rapid loss of strength, and coldness of the skin. The thirst is great, the vomiting

constant, and the purging consists of fetid fluid discharges containing a large quantity of bile at first, which, however, soon diminishes, until, at last, the discharges approach the rice-water appearance without smell. It prevails mostly during summer heat, although there are cases in other seasons; and it seems to be incited especially by exposure, checked perspiration, drinking large quantities of ice water, or imprudence in eating. It differs from Asiatic cholera in not being caused by a specific poison—in not being to such a degree epidemic and violent. It differs from poisoning with arsenic by its purging and vomiting setting in at the same time; whilst in cases of poisoning the vomiting almost always precedes the purging.

Therapeutic Hints.—Compare Cholera and Cholerine. Besides the remedies there characterized may be indicated:

Ant. cr., vomiting and diarrhœa, watery or slimy; great thirst for cold water, especially at night; tongue coated white; after sour wine.

Cham., after sudden taking cold; severe, cutting pains in the abdomen; vomiting of bile; painful, bilious evacuations; great irritability of mind; impatience; restlessness; child wants to be carried about; also after chagrin.

China, discharges mostly painless, containing undigested food; worse in the night, with great fermentation in the bowels, which are bloated; fulness of the bowels; sour eructations, and better for a while afterwards; especially after new or sour beer.

Dioscorea, vomiting and purging of watery stools, with painful cramps in the stomach, bowels, and extremities.

Euphorbia cor., forcible vomiting and diarrhœa of watery fluid, with sinking, anxious feeling at the stomach; faintness; slow and weak pulse; cool skin, feet, and hands, which become affected with painful cramps; painful spasms in the intestines; cold sweat on the body and extremities; death-like sensation, with anxiety of mind; no desire to live unless relief comes soon.

Iris vers., vomiting and diarrhœa, with violent pain in the pit of the stomach, or around the navel, or still lower down in the abdominal region, *at or before every fit of vomiting or purging;* burning in the rectum and anus; periodical spells of aggravation about two or three o'clock A. M.

Veratr. is the most important remedy.

Cholera Infantum, *Summer Complaint.*

A disease found every summer prevailing among children under two years of age, especially in large and densely crowded cities. It generally commences with diarrhœa, followed by vomiting. The discharges are whitish, ash-colored or yellowish, changing into green, or greenish, and having sometimes a very penetrating, and at other times a peculiar sweetish, fresh smell. The vomiting sometimes ceases for a while and comes on again. There is generally a great deal of thirst present, but the liquid is not retained. The child soon becomes weakened and emaciated; the abdomen sinks in, and the constant loss of fluids causes gradual and general anæmia, with symptoms of hydrocephalus. The child grows restless; utters now and then plaintive cries; rolls the head, commences squinting, and falls into stupor—a state of things which Marshall Hall has called "*hydrocephaloid*," in contradistinction to hydrocephalus acutus, which is of an inflammatory nature. This complaint, generally occurring during the period of dentition, most probably has its deepest cause in the rapid growth of the brain at that time, when it needs for its development an abundance of fresh air. We see, therefore, that a change of air alone sometimes recruits the little sufferer.

Therapeutic Hints.

Aethusa, stools watery, greenish, without smell; vomiting; the milk which the child drinks is thrown up in coagulated lumps; after stool and vomiting the child dozes; utters now and then plaintive cries, and again commences to doze; its face is pale, with a painful expression around the mouth.

Borax, constant vomiting; stools painless; at first frothy, thin and brown; later cadaverous-smelling, containing little bits of yellow feces, or colorless and slimy; belly soft, flabby and sunken in; general emaciation; sopor; child makes an anxious face, when carried down stairs, or put from the arms into the cradle.

Calc. c., stools whitish, watery, most frequent in the after part of the day; often of a sour smell; sour vomiting; great emaciation; greatly bloated abdomen; old, wrinkled face; retarded dentition; cold face; arms cold to the elbows. Child makes an anxious face, when being lifted up from the cradle.

Calc. phos., symptoms of Hydrocephaloid.

Kreosote, constant vomiting and greedy drinking; stools grayish or white, chopped, very fetid; belching or hiccoughing, especially when

being carried; the child moans constantly, or dozes with half-open eyes; face cold, with a pale bluish tinge, especially on the temples and around the nose and mouth; rapid emaciation; quick, scarcely perceptible pulse.

Natr. mur., vomiting and diarrhœa, worse during the day; great thirst; general emaciation, most conspicuous around the neck, which appears thin and shrunken.

Besides, compare those remedies which have been characterized under the head of Cholera Morbus, Gastric and Intestinal Catarrh; especially Arsen., China, Euphorb., Ipec., Iris, Lept., Phos., Veratr.

Intestinal Obstruction.

Under this general head we shall have to consider quite different pathological states, which, however, when developed, cause a certain array of symptoms that are common to all. By obstruction we understand any mechanical hindrance by which the normal passage of the intestinal contents is intercepted.

1. Such obstructions may consist in *partial closure of the gut*, in consequence of adhesions, or cicatrices of healing ulcers, or by hardened fecal matter; by foreign bodies adhering to the walls of the gut, or in thickening of the mucous membrane in consequence of chronic catarrh; by cancerous growths or polypi within the gut; or by tumors within the abdominal cavity; or by enlarged uterus or ovaries, compressing part of the intestinal canal.

2. It may exist as a *total closure of the gut*, caused either, *a.* By *strangulated hernia*, (umbilical, inguinal, scrotal;) or, *b.* By *incarcerated internal hernia* into the foramen Winslowii, or foramen ovale, or into any abnormal fissure or opening which has been formed by inflammation and consecutive adhesion, and formation of bands and strings within the cavity of the abdomen; or, *c.* By *a twist of the gut around its own axis or around another portion of the intestines;* or, *d.* By an *intussusception* or *invagination* of one portion of the gut into the cavity of another portion next below it.

The symptoms of partial closure are as follows: *Habitual constipation.* The excrements are of smaller size than natural, perhaps only finger thick, or in shape of little lumps like sheep's dung, or appear flattened and angular.

2. The portion of the intestine above the stricture becomes widened, in consequence of accumulation of feces. This accumulation causes a large amount of gas, which gives rise to partial and general meteor-

ism. In consequence of this the diaphragm is pressed upwards, causing difficulty in respiration; and as the motus peristalticus downwards is interfered with by the stricture, the effort of the bowels to rid themselves of their contents causes a reverse motion—a motus antiperistalticus; and thus we find in bad cases of this nature, belching, vomiting even unto *ileus or miserere;* that is, stercoraceous vomiting.

The symptoms of total closure come on either suddenly or slowly. When *suddenly,* we find—1. A *fixed pain* more or less violent in one or the other region of the abdomen. This pain is sometimes continual and sometimes intermitting; the place where it is felt is very sensitive to the touch.

2. *Vomiting,* at first, of such things as the stomach contains; later of a watery, bilious substance; and, at last, of stercoraceous matter, ileus, miserere.

3. The face collapses, the pulse becomes small and quick, and respiration superficial.

4. Symptoms of peritonitis—no stool, and, at last, singultus; the forerunner of fatal termination.

When the symptoms appear *slowly,* we find—1. A pain fixed to some part of the abdomen, from where it radiates in all directions; still it does not increase to such a pitch as in the other case.

2. Vomiting, but much less frequent, perhaps only two or three times a day, yet also terminating in ileus or miserere if an evacuation from the bowels cannot be produced.

3. Through the abdominal walls we feel the inflated portions of the bowels, like round bags, in which gas and fluids roll about, and which the patient *feels* and others *hear.* These are the signs of partial and total closure of the intestinal canal, and which I have summed up under the general head of *intestinal obstruction.*

We can diagnosticate partial from total obstruction; in the first case there is still some evacuation, no matter how difficult and out of shape it may be, whilst in the latter there is none at all; but whether in a given case the intestinal obstruction consists of an incarcerated internal hernia, or in a twist of a portion of the intestine around its own axis, or in an invagination of the gut, we scarcely ever can diagnosticate with any certainty.

Partial obstruction takes on a chronic, slow course.

Total obstruction must terminate either favorably or fatally in the course of a few days.

Therapeutic Hints.—Partial obstruction, in consequence of cicatrices or chronic catarrh of the mucous membrane, or cancerous growth or polypi, or tumors or enlarged abdominal viscera, must, of course, be treated individually. Compare the corresponding chapters.

Total obstruction, if caused by strangulated *external hernia*, suggests **Acon.**, Alum, Aur., **Bell.**, Calc. c., Caps., Cham., Coloc., Lach., **Lyc.**, Nitr. ac., **Nux v.**, **Op.**, Plumb., **Rhus t.**, Silic., **Sulph.**, **Sulph. ac.**, Ver.

Ileus, Ars., **Bell.**, Cham., Coccus, Coloc., Lyc., Nitr. ac., **Nux v.**, **Op.**, Plat., Rhus t., Silic., Sulph., Thuya, Ver., Zinc.

Only the uncovered parts of the body perspire, Thuya.

Chronic constipation, as a general symptom, may indicate:

Aescul. hipp., dry, uncomfortable feeling in the rectum, as if it were filled with small sticks; very painful hemorrhoids, with little bleeding; aching and lame feeling in the small of the back, extending to the sacrum and hips; worse when getting up after sitting.

Alumin., the rectum is inactive; the evacuation can be effected only by straining the abdominal muscles; stools very hard, knotty and scanty; ailments from lead.

Am. mur., hard stools; crumbling to pieces when evacuated; requiring great effort to expel them, followed by soft stools.

Anac., urging without being able to expel any thing; the rectum feels as if stopped up with a plug; the expulsion not taking place immediately, he experiences a painful twisting and turning in the intestines across the abdomen.

Bryon., hard, dry stools, as if burnt; of large size and passed with difficulty; rheumatic tendency; irritable and prone to fits of anger; after castor oil.

Calc. c., hard, large, partially undigested stools; after stool feeling of faintness; oozing of a fluid from the rectum, smelling like herring-brine; too early and too profuse menstruation; restless sleep after three o'clock A. M.; scrofulous diathesis.

Capsic., after drinking urging to stool, but only slime is passed; feeling of heat in the abdomen.

Carbo veg., urging with tingling in the rectum and pressure on the bladder; labor-like pain; discharging feces in fragments, which are tough and scanty.

Caust., frequent and unsuccessful urging, causing a good deal of pain, anxiety and redness of the face; stool comes off in pieces; at last soft, and of the size of a goose-quill.

China, large accumulation of feces in the intestines, with dizziness and heat in the head; difficult stool, even when papescent.

Conium, frequent urging without stool, or a small quantity being expelled at a time; chilliness during stool; palpitation of the heart and tremulous weakness afterwards; the flow of urine suddenly stops and continues after a short intermission; dizziness when turning in bed.

Graph., hard, knotty stools, with tenesmus and stitches in the rectum; sometimes the stool is only of the size of lumbricoides; a quantity of mucus is expelled with the stool; itching blotches about the body, which emit a glutinous fluid.

Hydrastis, constipation, headache and piles; after stool, for hours severe pain in the rectum and anus; colic pains with fainting turns, and heat in the bowels.

Hepar, sluggishness and inactivity of the bowels, in consequence of which the abdominal muscles must bear down in order to effect an evacuation, which is hard or not, but insufficient; after mercurial dosing.

Iod., desire for stool, without evacuation; it takes place with great facility after taking some cold milk; discharges of thick mucus, or purulent matter; part of the feces being retained.

Kali bichr., stools dry, scanty, knotty; painful retraction of the anus; debility, headache, coldness of the extremities; tough secretion from any of the mucous membranes.

Kali c., too large-sized feces; inactivity of the rectum; severe, lancinating, tearing and cutting in the anus; violent pain in the small of the back, as if broken.

Lach., constipation of years standing; the anus feels closed; the feces press against it all the time without passing; only single flatus are passed; the feces have a cadaverous smell; hemorrhoids, with stitching pain in the varices when coughing or sneezing.

Lycop., ineffectual urging, owing to contraction of the rectum, (sphincter ani;) distressing pain in the rectum for hours after evacuation; excessive and painful accumulation of flatus in the abdomen; red, sandy deposit in the urine.

Magn. m., urgent pressure in the rectum; the stool comes out in small pieces, and seems as if burnt; shuddering for a short time after stool.

Natr. c., insufficient stool, with tenesmus, followed by burning in the eyes and urethra, with great sexual excitement.

Natr. m., pressure from the navel downwards into the pelvis, or a

leaden heaviness through the pelvis and across the bladder, worse when walking, and better when sitting in a bent forward position; hard, dry stools fissuring the anus, makes it bleed; a number of bad feelings in the anus *after stool;* also cutting in the urethra *after* micturition.

Nitr. ac., hard, scanty stools; long pressing when going to stool; painful burning in the rectum, especially after micturition; urine emitting an intolerably strong smell.

Nux v., constant, ineffectual urging to stool; large, hard feces; piles; headache; unrefreshing sleep; after previous use of purgative medicines; coffee and liquor drinkers; use of high-seasoned food; sedentary habits.

Opium, stools in hard, black, round balls; decided torpor, even paralysis of the rectum; vomiting of stercoraceous substances in consequence of intussusception; incarcerated hernia.

Phos., stools narrow, dry, long, and difficult to expel; exceedingly painful cramps in the rectum after stool.

Phytolacca, constipation of long standing; pain shooting from the anus and lower part of the rectum along the perinæum to the middle of the penis.

Platina, difficult expulsion of scanty stool, adhering to the part like soft clay; after poisoning with lead; travelling in the cars.

Plumbum, stools consisting of small hard balls; constriction and drawing up of the anus; frequent, violent colic; drawing in of the abdomen in the region of the navel.

Podoph., constipation with great difficulty; prolapsus ani; frequent micturition; weakness and soreness of the back; especially after washing.

Prunus spinosa, hard stool; intermitting stool, looking like the excrements of dogs, in small lumps, with stitches in the rectum, extorting cries.

Ratanhia, urging sensation in the small of the back, as if there would be stool; hard stool with straining; fissures of the anus.

Ruta, scanty, hard stool; frequent urging to stool, with protrusion of the rectum, also during stool; the rectum protrudes when stooping ever so little, and especially when squatting; a considerable quantity of flatulence is emitted whenever the urging takes place.

Sabadilla, violent urging to stool, with noise like the croaking of frogs; necessity of sitting a long while, then passes an immense quantity of flatulence, which is followed by an enormous evacuation, after that, burning pain in the abdomen.

Sarsap., obstinate constipation, with violent urging to urinate; urging to stool, with contraction of the intestines, and excessive pressure from above downwards, as if the bowels would be pressed out; during stool violent tearing and cutting in the rectum; afterwards a repetition of the same symptoms.

Selen., stool so hard and impacted that it has to be removed by mechanical aid; the feces contain threads of fecal matter like hair.

Sepia, unsuccessful urging to stool, only wind and mucus being passed, with sensation in the rectum *as of a lump having lodged in it;* contractive pain in the anus; thence in the perinæum and vagina; oozing of moisture from the rectum.

Silic., stools composed of hard lumps; after long straining the protruding feces suddenly recede into the rectum.

Sulphur, constant urging, pressing on the rectum as if it would protrude, with pressing on the bladder; prolapsus ani; palpitation of the heart; after stool excessive stinging and sore pain in the anus, preventing lying or sitting down; rush of blood to the head; cold feet; faintness regularly, shortly before dinner.

Sulph. ac., hard stool, consisting of small, black lumps mixed with blood, and with such violent pricking in the anus that she has to rise on account of the pain; climacteric age; constant flashes of heat; tremulous sensation in the whole body without trembling.

Tabac., constipation; tympanitic bloating of the abdomen; dyspnœa.

Thuya, obstinate constipation, fever, inactivity, or intussusception; hard balls; violent pain in the rectum, which prevents the passage; offensive perspiration at the anus and in the perinæum.

Verbasc., scanty discharge of stool, like sheep's dung, with straining.

Veratrum, chronic costiveness with heat and pain in the head; stools large and hard, or first portion of the stool of large size, the latter coming out in thin strings, although of the same consistence and color. During stool turning pale and feeling very weak.

Zinc., dry, hard, insufficient, and difficult stool.

Hemorrhagia Intestinalis, Intestinal Hemorrhages, Malæna,

Takes place in consequence of either—1. *Obstructed circulation of blood through the vena porta,* as in the case of cirrhosis of the liver, diseases of the heart and lungs, compressions of the blood-vessels by large abdominal tumors; or, 2. *Erosions or degeneration of the blood-*

vessels from intestinal ulcers during typhus, yellow fever, scurvy, &c.; or, 3. *Lesions caused by corroding or cutting substances, wounds*, &c.; or, 4. Suppressed, normal, or habitual bloody discharges, as menstrual or hemorrhoidal. A copious, internal hemorrhage is characterized by sudden paleness, coldness of the body, collapsed features, weak pulse, fainting, fits of chilliness, and discharges of blood from the bowels. The discharged blood, when it comes from the upper portion of the intestines, is generally dark and mixed with intestinal contents like tar. It is generally red and fluid when it proceeds from the lower portions. The exact seat of the hemorrhage, however, cannot be determined, as physical examination gives no hint whatever in regard to it. The bleeding may occur even within the stomach, as I have mentioned when I spoke of hæmatemesis; and a black, tar-like appearance of stool is not a sign that it contains blood, as it may be colored by bile. This, however, may soon be settled. Throwing the passage into water it colors the water *red* when it contains blood; and when it contains bile the water is colored *green* or *yellowish*.

Therapeutic Hints.—Compare the above-stated morbid conditions, which are the causes of the intestinal hemorrhage.

As generally indicated, the most important remedies are, Ars., Carbo veg., China, Erigeron, Hamam., Ip., Nitr. ac., Sulphur.

Hemorrhoids, *Piles*,

Consist of an enlargement of the hemorrhoidal veins, which are situated in the mucous membrane outside and inside of the sphincter ani. When their outside ramifications are swollen they are called *external hemorrhoids;* when their internal ramifications above the sphincter ani become widened, they are called *internal hemorrhoids*. When, during an effort to evacuate the bowels, one of these varicose veins bursts, they are called *bleeding piles;* when they do not bleed they are called *blind* hemorrhoids; and when, in consequence of a chronic catarrh of the mucous membrane, a slimy, mucous secretion oozes from the anus, they are called *white* or *slimy* hemorrhoids.

These enlarged veins form tumors of different sizes, from a pea to a cherry or walnut, and sometimes encircle the whole anal opening like a bunch of grapes. Being pressed out through the sphincter they become strangulated by its contraction, and assume a bluish-dark appearance.

But then the hemorrhoidal veins are not always in such turgescent

state. A longer or shorter interval intervenes between these spells of turgor, when the patient feels comparatively free from any inconvenience. The repeated recurrence of turgescence, however, causes a gradual thickening of the walls of the veins, and thus old hemorrhoidal tumors assume a more skinny, paler and harder appearance. These varicose veins, which, by each evacuation, are pressed down, become gradually elongated, and, uniting with the likewise elongated mucous membrane, develop into little, stationary, soft bags outside of the sphincter ani. These occasionally inflame, in consequence of a new spell of turgor in the hemorrhoidal vein within. They are called *marisci*, and must not be confounded with condylomata or fig-warts.

For ages piles have been believed to be of great benefit to the organism, and they were therefore called *the golden vein;* and, indeed, if we consider all the kinds and amount of mischief which may be done in the body by the suppression of hemorrhoids, this expression would seem to be founded upon sound observation, and would at once remove those superficial assertions, that piles are a mere local disease. Still, after all, they may have proved a *golden vein!* but to the attending physician, rather than to the poor suffering patient, whom we frequently find trying the most absurd things to rid himself of this torment.

The principal predisposing cause of piles seems to be the position of the hemorrhoidal veins, as the lowest branches of the abdominal vessels, and in their want of valves to sustain the return column of blood in its course towards the vena porta. When a retardation or stagnation by some means or other in this backward moving column takes place, it is obvious that its whole weight must press downwards upon its last branches, overfilling and widening them, and causing a varicosity in these branches, which is known under the name of hemorrhoids. Such retardation of the refluent stream of blood may arise from different conditions:

1. From tumors within the abdominal cavity, which press upon the veins of the rectum; a gravid uterus, &c.

2. From diseases of the liver, which obstruct the vena porta.

3. From diseases of the lungs, by which its capillaries become either obstructed or destroyed.

4. From diseases of the heart, by which the veins become overfilled with blood.

5. From a general relaxation of the abdominal veins, in consequence of using too much wine, coffee, tea, or leading a sedentary life.

The fact, however, that all the members of a family frequently suffer with this complaint, seems to favor the assumption that piles are of a hereditary nature.

Symptoms.

As forerunners to their local appearance, we observe a fulness and pressure in the epigastrium, disturbed digestion, bloatedness of the abdomen, costiveness, dull pain in the small of the back, also in the head and nape of the neck, hypochondriacal disposition, disinclination to work, and especially to mental occupation, all of which are symptoms that denote a disturbed action in the abdominal organs. After a shorter or longer duration of these symptoms, we find a gradual development of those local symptoms at the anus—the beginning of varicose veins, their gradual growth, their turgescence and their collapse, alternating in longer or shorter intervals. Thus the whole complaint is of a very slow and tedious nature, changing constantly from better to worse. The occasional spells of bleeding are frequently attended with a feeling of relief, though they do not better the morbid process itself in any way; they become in some cases habitual, assuming a regular type of from three to four weeks intervals.

In such cases the organism becomes so much habituated to them, that when these hemorrhages are suppressed in consequence of mental emotions, taking cold, external medical applications, &c., other disturbances at once set in; as, congestion of the head, lungs, stomach, liver, kidneys, &c., which may even result in nose-bleed, hæmoptysis, bloody urine, apoplexy, &c. But there are still other sequelæ attending this disease. In consequence of the stagnation of the refluent stream of blood, which is caused by liver, heart or lung diseases, there arises, especially in older individuals, a varicose state of the veins of the neck of the bladder, uterus and vagina, causing hemorrhages from these organs, or slimy discharges, painful micturition, &c.

Sometimes the hemorrhoidal tumors inflame; suppurate; form fissures of the anus; cause painful contractions of the sphincter, or prolapsus ani. This is a list of the most annoying, and frequently the most depressing, features of the so-called *golden vein*, which is far more appropriately called "piles."

Therapeutic Hints.

Acon., bleeding piles; stinging and pressure in the anus; abdomen feels full, with tensive, pressive and colicky pains; bruised feeling in the back and sacrum.

Aescul. hipp., protruding piles, bleeding slightly, attended with constipation; severe fulness and bearing down; aching pain and lame feeling in the back.

Aloes, protruding piles, like bunches of grapes; hot and sore; relieved by cold water; when urinating he has a feeling as though some liquid discharge from the bowels would take place at the same time.

Alumina, stools hard, and of the shape of laurel-berries, attended with cutting pain in the anus, as if it were too narrow; succeeded by a jet of blood from the rectum, followed by soreness in and along the rectum.

Amm. c., varices protrude during stool, and without stool; they are moist, and with a pain as from excoriation; discharge of blood during and after the evacuation; burning pain in the rectum, itching of the anus.

Ant. cr., tingling, itching, and burning of the varix; mucous secretion from the rectum, staining the linen yellow; alternate constipation and diarrhœa.

Apis, small protruding varices, which sting, burn, and smart intolerably, making one very irritable and fidgety; stool constipated, urine scanty.

Arsen., varices, which burn like fire, particularly at night; fissures of the anus, with impossibility of voiding urine; urine bloody; small of the back feels as if broken; impossibility of stooping; burning in the skin and veins; great weakness and restlessness.

Bell., bleeding piles with severe pain in the small of the back, as if it would break; incarcerated varices by a spasmodic contraction of the sphincter ani, with great pain from the slightest touch; on this account the patient must lie with the nates separated; dysuria; congestion of the head; feverish restlessness.

Calc. c., profusely bleeding piles; protruding; painful when walking, better when sitting; too early and too profuse menstruation; habitually cold, damp feet; after suppression of the hemorrhoidal flow, constant giddiness, especially on going up stairs; heaviness and fulness of the head; swelling of the pit of the stomach; palpitation of the heart; offensive sweat on the feet, making the soles of them raw.

Caps., the varices bleed a long time; the flowing blood causes a burning pain in the anus; the stool is mixed with bloody mucus; there are drawing pains in the back and cutting pains in the belly.

Carbo veg., protruding piles, blue, even suppurating, emitting a terrible smell; burning in the rectum; oozing of humor from the rectum; flatulence, congestion of the head, and nose-bleed.

Cascarilla, frequent and excessive bleeding from the rectum during and after hard, brown stool in large lumps, and without stool.

Caust., varices large, painful, stinging; burning when touched, hindering stool; increased by walking and reflection; fistula ani.

Cham., bleeding hemorrhoids with colic; frequent urging and diarrhœa; pain in the back, worse at night; ulcerating fissures at the anus; great restlessness, crying, screaming, tossing; sweating; angry, peevish and ill-humored.

Collinsonia, flowing piles, incessant, though not profusely, or protruding piles without bleeding; sensation in the rectum as if sticks, sand or gravel had lodged there; growing worse as evening approaches till late at night, better in the morning; constipation of the bowels and pain in the epigastrium, with loss of appetite; or diarrhœa.

China, bleeding piles; burning and burning-itching; tingling in the anus, with creeping and itching extending into the urethra, attended with burning in the glans.

Erigeron, bleeding piles; hard, lumpy stools.

Graph., varices and prolapse of the rectum, even when there is no desire for stool, as if the rectum had lost its contractile power and had become paralyzed; painful, burning cracks (rhagades) between the varices; chronic constipation with hardness in the region of the liver; stool hard, knotty, with blood and slime; scanty and delayed menses; leucorrhœa like water.

Hamam., profusely bleeding hemorrhoids, characterized by burning, *soreness,* fulness, and weight; at times rawness of the anus; the back feels as if it would break off; pricking pain, worse from pressure, from the wrist to the shoulder along the course of the superficial veins; the same pricking pain in the region of the heart.

Hepar, inflammation and suppuration of the hemorrhoidal tumors.

Ign., bleeding piles; violent, shooting pains high up in the rectum; prolapsus recti during stool; cutting, tearing in the rectum, continuing for hours after stool; for quiet people, or such as get easily excited and easily depressed.

Kali c., in consequence of constipation with too large stools; the hemorrhoidal tumors swell and become large and painful; they bleed, especially during micturition, and emit slime afterwards; riding on horseback ameliorates the pain considerably for the time being.

Lachesis, protruding hemorrhoids, very painful; a stitching pain is felt to go through the hemorrhoidal tumors, especially during

coughing or sneezing; also at the critical age with scanty menstrual flow.

Leptandra, frequently bleeding piles; constipation and distressing pain beneath the sacrum.

Lycop., protrusion of varices, painful when sitting; distention of the whole abdomen, and rumbling after stool; cutting in the rectum and bladder; itching eruption around the anus, painful to the touch; grayish-yellow color of the face; depressed spirits; frequent urging to urinate; slimy or reddish-sandy sediment in the urine.

Merc., large, bleeding piles during stool, which is watery; hemorrhage from the rectum during micturition; falling of the rectum, which is black and bleeding; inflammation and suppuration of the hemorrhoidal tumors.

Mur. ac., largely protruding piles, which look bluish and are exceedingly painful to contact—even the sheet is insupportable; prolapsus recti on passing off of loose stool during micturition.

Natr. mur., varices, painful, stinging, and humid; protrusion of the rectum; smarting and beating in the rectum; burning at the anus; herpes about the anus; herpes on the boundaries of the hair in the nape of the neck; cutting pain in the urethra *after* micturition.

Nitr. ac., bleeding piles, protruding after each stool; the sharp-cutting pain in the rectum lasts for hours after an evacuation, and is much worse after a loose stool.

Nux v., all sorts of piles after purgative medicines and external and internal allopathic treatment; in persons of sedentary habits, or addicted to the use of coffee, wine, liquors, spices, &c; ineffectual urging; constipation; headache; sleeplessness early in the morning; hypochondriac mood; fissures of the anus, with great sensitiveness of the rectum.

Petrol., burning and stitching in the anus and rectum; scurf on the border of the anus; titillating and smarting; itching herpes on the perinæum.

Phos., varices protrude during emission of flatulence; mucous discharges from the anus, which is constantly open; discharge of dark, coagulated blood; vertigo, especially on looking up or down.

Phos. ac., bleeding piles, with intolerable pain in sitting.

Podoph., piles and prolapsus ani, with diarrhœa of long standing; worse in the morning; or constipation with flatulence and headache.

Puls., blind and flowing hemorrhoids; discharge of blood and slime with the stool; colicky pain; painful pressure upon the hemor-

rhoidal tumors; backache; fainting spells; mild, gentle and tearful disposition; dryness and bad taste in the mouth every morning; no thirst.

Ratanhia, protrusion of the varices after hard stool, with straining and violent pressing in the rectum; burning at the anus before and during a diarrhœic stool; fissures of the anus, with great sensitiveness of the rectum.

Rhus t., sore, blind hemorrhoids protruding after every stool; drawing in the back from above downwards, with tension and pressing in the rectum, as if every thing would come out; labor-like drawing towards the uterus, when standing; pain in the small of the back, as if bruised, when lying or sitting still; going off when moving about.

Sepia, protrusion of piles and rectum, even after soft stool; worse after drinking milk; continual straining pain in the rectum; difficulty of urinating, especially in the morning; a feeling as if drops came out of the bladder, which is not the case; heat, burning and swelling of the anus; the varices become hardened; oozing of moisture from the rectum; soreness between the buttocks.

Silic., inflammation and suppuration of the hemorrhoidal tumors.

Sulph., all sorts of piles; constant ineffectual urging to stool; or thin, bloody stools; worse in the morning, with soreness of the anus, or single violent stitches in the rectum, also between stools; arresting the breathing and causing him to start; prolapsus recti during stool, particularly when hard; tensive pain and stiffness in the small of the back, as if the parts were too short; inability to stand erect; burning micturition. After suppression of habitual bleeding: congestion of the head; dizziness; palpitation of the heart; pain in the pit of the stomach, with difficulty of breathing; loss of appetite; sudden hunger, with faintness before dinner; sleepiness.

Thuya, the hemorrhoidal tumors are painful when touched *ever so slightly;* sycosis.

Flatulency, Bloatedness, Meteorism of the Abdomen.

We mean by these terms an *abnormal collection of gas in the intestinal canal.* It may be caused:

1. *By certain kinds of food,* as, not well-fermented beer, sweet cider, fresh bread, green peas, unripe fruit, cabbage and the like.

2. *By a morbidly changed condition of the digestive juices,* which cause fermentation of the intestinal contents.

3. *By a relaxed state of the muscular coat of the intestines,* in consequence of which the contents of the bowels are not properly moved

forwards, and become decomposed into gaseous substances. For this reason we frequently observe meteorism in severe cases of typhus, pneumonia, acute exanthematic and puerperal fevers, after the abuse of purgative medicines, in diseases of the brain and spine, also in hysteria and hypochondria.

4. *By mechanical obstructions of the intestinal canal*, as, strangulated hernia, intussusceptions and twistings of the gut around its own axis.

Symptoms.

The abdomen appears bloated, puffed out, feels either elastic, or more or less inelastic and hard, according to the degree of compression of the gas within. Percussion generally yields a tympanitic sound, unless there be a greater tension of the gas within than of the external air, in which case the percussion sound is not tympanitic, and may be even dull. Auscultation reveals here and there gurgling noises, and even the metallic tinkling may be heard when the fluid contents move within the expanded guts.

Such abnormal expansion of the intestines drives the liver, stomach, and lungs higher up into the thoracic cavity, causing, in this way, oppression, dyspnœa, palpitation of the heart, anxiety, fainting, and congestion of the head. The expansion downwards causes pressure upon the bladder, difficult urination, pressure upon the rectum, and frequent desire for stool, and pressure upon the uterus. This abnormal collection of gas is frequently associated with spells of violent colic, loss of appetite, nausea, &c. Belching, or the passing off of flatus, gives always great relief. The gas passed consists mostly of carbonic acid gas, or hydrogen gas, or sulphuretted hydrogen gas.

It is obvious that the prognosis depends entirely upon the cause, of which meteorism is the consequence. Meteorism is of little consequence if caused merely by improper food, or the improper condition of digestive juices. It becomes a more serious symptom when caused by a relaxed state of the muscular coat of the intestines, and is most serious when caused by intestinal obstruction.

Therapeutic Hints.

Carbo veg., much belching, sour and rancid; bloatedness of stomach and bowels; oppression of the chest; palpitation of the heart; consequences of high living.

China, distention of the abdomen; oppression of the stomach; eructations, especially after eating; great fermentation in the bowels; after new or sour beer and fruit.

Cham., attended with severe colic; the abdomen is swollen like a drum; the gas passes off constantly, but in small and insufficient quantities.

Lachesis, eructations of air affording relief; distended stomach; incarceration of flatulence.

Lycop., constant rumbling and gurgling of wind in the bowels, especially in the left hypochondrium; incarcerated flatulence, which bears downwards upon rectum and bladder, causing a number of bad feelings.

Nux v., pressure towards the chest and head; oppression of the chest; constipation, with constant, ineffectual urging; after spirituous drinks, coffee, condiments, &c., in consequence of sedentary life.

Pulsat., especially in consequence of spoiled stomach from eating fat things, pastry, warm cakes, fruits, &c.

Besides, compare Gastric and Intestinal Catarrh, Costiveness and Colic.

Colica Enteralgia.

We understand by this term a paroxysmal pain in the abdomen of a purely neuralgic character without any discoverable pathological change within the structure of the intestines, although it may attend different morbid processes which consist of such pathological changes. The causes are numerous; they may be classed under the following heads:

1. Such as are dependent upon anomalies of the intestinal contents: as abnormal quantity or quality of food, *colica saburralis;* or abnormal development of gas, *colica flatulenta, wind colic;* or accumulation of hard feces, *colica stercoracea;* or foreign irritating bodies, like worms, *colica verminosa;* or metallic bodies, like lead; *colica saturnina*; or copper, *colica æruginosa.*

2. *Such as are dependent upon a disturbed innervation,* either—*a. Primarily* within the great centres of innervation themselves; from mental emotions, in case of hysteria or hypochondria and spinal diseases—*colica nervosa;* or, *b. Secondarily,* in consequence of diseases of other organs, which may cause a pain in the bowels sympathetically on the principle of "reflex action." Hence, authors speak of *colica hepatica* when the liver, of *colica uterina* when the womb, of *colica renalis* when the kidneys, are thought to be the starting point of the colic. Still, we ought to remember that in such cases the pain may not be an intestinal colic at all, but merely an irradiation from the primarily affected parts.

3. Such as are dependent upon *structural changes in the intestines,* among which we may reckon colicky pains in dysentery, catarrhal affections, typhlitis, hernia, intussusception, strangulation, twisting, &c., in the various abdominal disorders. There is also a kind of colic produced by taking cold, especially of the feet and abdomen, and which is called *colica rheumatica.*

Symptoms.

1. *Pain.* It is of a crampy, severe griping, or twisting nature, coming and going in paroxysms, either in the umbilical region or in the side of the abdomen; oftentimes shifting from one place to another. External pressure sometimes gives relief and sometimes aggravates the pain; in other cases it shows no influence. External application of warm things relieves in a majority of cases, whilst cold things almost always aggravate the pain.

2. *Rolling and gurgling in the abdomen,* occasioned by irregular contractions of the intestines and the moving of their fluid and gaseous contents, which may be felt by the examining hand.

3. *Bloatedness of the abdomen* where there is a great collection of gas, or *contraction of the abdomen,* especially in lead colic.

4. *Constipation;* it is only in rare cases that colic is attended with diarrhœa.

5. *Nausea, vomiting, and belching.*

6. *Cold perspiration and extremities; small pulse.*

7. *Anxious, frightened expression of countenance, contraction of eyebrows, and compression of the lips.*

8. *Great restlessness;* the patient tries all possible positions to obtain relief—now lying on the stomach, now drawing up the limbs, now bending and pressing the abdomen against a hard object, a chair, table, or bed-post; now sitting down, now walking about, now trying to evacuate the bowels, &c. In some cases, however, the slightest motion increases the pain.

The spells usually last some hours, in some cases longer.

Wind colic ceases as soon as the incarcerated gas finds vent or passes off.

Colic from indigestion is relieved by vomiting or diarrhœa; colic from hard feces passes off as soon as there is a sufficient evacuation from the bowels.

Colic from taking cold is always relieved by a general warm perspiration.

As there are so many causes for, and so many different affections

with which colicky pains may be associated, it is absolutely necessary in each particular case which comes under our observation, to make as close an examination as possible, in order to find out what lies at the bottom of the painful affection.

Colic from indigestion, or *colica saburralis*, is brought on either from overloading the stomach or from improper or unhealthy nourishment.

Here are indicated—

Nux vom., after coffee, brandy, large meals.

Pulsat., after fat food, pastry, and flatulent food.

Ipecac., after sour and acrid fruits and salads.

Arsenic, after ice water and ice-cream.

Flatulent colic is characterized by distention of the abdomen, gurgling and rolling in the bowels or pressure upwards towards the thoracic cavity, causing pain there and shortness of breath, or pressure downwards upon bladder and rectum.

Here are indicated—

Belladonna, if associated with congestion of the head.

Carbo veg., when there is a great deal of sour and rancid belching, without much relief.

Cham., when the abdomen is distended like a drum, and wind passes off only in small quantities without relief.

Lycop., in cases of habitual costiveness and great pressure downwards upon rectum and bladder.

Nux vomica, when there is great pressure upwards toward the thoracic cavity.

Opium, when there is great pressure downwards upon bladder and rectum, without any passing off of feces, gas or urine.

Rheumatic colic follows upon suddenly taking cold, getting wet, &c. Here are indicated—

Aconite, after suppressed perspiration, exposure to sharp northwest wind.

Colocynthis, cutting, pinching, contracting pain, with hot or cold skin, pulse irritated.

Dulc., after taking cold; the griping is attended with nausea in the stomach and followed by diarrhœa.

Pulsat., after getting the feet wet.

Rhus tox., after getting wet all over.

Nervous colic is a consequence of morbid innervation arising sud-

denly, sometimes without any known causes, showing no abnormity in the abdominal cavity.

Here are indicated :

Colocynthis, after indignation.

Belladonna, clawing around the navel; better from pressure.

Ignatia, after grief and fright.

Opium, after sudden fright.

Plumbum, contracted abdomen.

Lead colic—poisoning by lead. Bluish-gray line along the gums; contracted abdomen; pain lessened from external pressure; obstinate costiveness; slow pulse.

***Antidotes*—Opium, Platina, Nux vom., Alumina, Ant. cr., Cocc., Zinc.**

Copper colic—poisoning by copper. Distended abdomen; pain worse from slightest touch; nausea; vomiting; tenesmus.

***Antidotes.*—Hepar, Nux v., Bellad.**

All other, secondary forms of colic, are mere attendants upon other disturbances, which either have been considered already, or will be considered in the course of our future investigations.

Special Hints.

Acon., intolerable, cutting pains in the belly, so violent that he screams, tosses about, and is almost beside himself; after taking cold.

Alum., lead colic.

Arsen., pains in the whole abdomen, excessive; worse at night, after eating and drinking; better from warm application; with vomiting, or diarrhœa, or costiveness; great anguish, lamentations, tossing about; internal restlessness, which does not allow one to lie still; despair of life; after the use of ice water, ice-cream; bad sausages, cheese; lead poisoning.

Asa f., distention of the abdomen, with severe pain and a feeling as though something were rising from below upward into the chest and throat; during the height of the paroxysm, fainting; pain better from external pressure; in hysteric and hypochondriac persons.

Aurum, painful accumulation of gas below the left ribs, causing a stitching pain there; coming on even after eating the simplest food.

Bell., during the pain the transverse colon protrudes like a pad all the way across the belly; while sitting or standing and walking, much worse, with a feeling as though the intestines were loose and dragging downwards; external pressure and bending double relieves some-

what; protrusion in the inguinal region as thick as a finger, which, when pressed upon, disappears with a gurgling sound; pain below the navel, as though a portion of the intestines were seized with the nails, clawing it together; thin purulent stool; congestion of the head; copper colic.

Bryonia, after taking cold; cutting, lancinating pain in the abdomen; worse from motion and drinking cold water; bowels constipated; feces hard, as if burnt; tongue coated, white, dry, without thirst; or else great thirst.

Calc. c., severe spasms in the intestines, especially in the evening and at night, with coldness of the thighs; feeling of coldness in the abdomen; enlargement and hardness of the abdomen, particularly in teething children; diarrhœic, clay-like stools, smelling sour or fetid; sweat on the head.

Carbo veg., fulness and distention of the abdomen, with a feeling as though it would burst; squeezing and pressing in the left side of the epigastrium, or in the region of the bladder; oppression of the chest; belching, tasting sour and rancid; headache; chilliness over the back; hypochondriac mood; worse from eating, if ever so little; better from emission of flatus or hard stool; colic from riding in carriage.

Caust., crampy colic of a chronic character; pain from the stomach through to the back, up into the chest, down into the abdomen; belching; rumbling in the bowels; obstinate constipation; tongue coated whitish on both sides.

Cham., flatulent colic; the abdomen is distended like a drum, or the wind presses here and there against the abdominal walls, with a feeling as if it would pierce through; or the patient has a feeling as if the whole abdomen were hollow, with continual rolling in the bowels and blueness around the eyes; or the excessive pain simulates a sensation as if the parts were rolled up into a ball; vomiting; diarrhœa, green and slimy; or continuous, with passing of small quantities of flatus without relief; great restlessness, anxiety; sticky or hot perspiration; after chagrin.

China, distention of the abdomen, with pressing under the short ribs; rumbling and cutting pain in the bowels; worse at night; brought on by eating fruit or drinking new beer; after exhausting illness, loss of vital fluids, profuse perspiration.

Chinin. sulph., flatulent colic of an intermitting type.

Cocc., flatulent colic, about midnight, with incessant formation of flatulence, distending the abdomen, going off without relief, and obliging to turn from side to side; belching relieves; the pain is severest

in the epigastric, umbilical and right iliac region; nausea, vomiting; yellow face; cold perspiration, anxiety and restlessness.

Colchic., great distention of the abdomen; also when the abdomen is empty, aggravated by eating; the stomach feels icy cold; after flatulent food.

Coloc., all sorts of violent pains, mostly in the umbilical region, or from the sides concentrating in the middle; the patient doubles up, or seeks relief by pressing the belly against the bed-post or any other hard object, or in lying on the belly; likewise a tight cramp-like pain in the left iliac and inguinal region, which is worse *after* (not during) external pressure, especially observed in women after excess in venere; after indignation; abuse of opium; a cup of coffee generally relieves the pain for a while.

Cupr., violent spasms in the abdomen and in the upper and lower limbs, by spells; cutting pain in umbilical region, as if a knife were thrust through into the back; screams as though he were being killed, throwing himself upon the floor.

Dioscorea, constant dull pain in the epigastric and umbilical region; exascerbations in paroxysm to a violent twisting pain; worse on lying down and in the morning.

Dulc., colic when the weather changes suddenly from warm to cold; griping in the bowels, with nausea, and coldness in the small of the back; diarrhœa.

Hyose., colic as if his abdomen would burst, he presses his fists into his sides; spasmodic cutting, vomiting, belching, hiccoughing, and screaming.

Ign., periodical abdominal spasms, particularly at night, waking out of sleep, with stitches running up into the chest and to the sides; in sensitive and hysteric women.

Ipec., colic of children, with diarrhœa, uneasiness, screaming, and tossing about.

Kali c., colic, as if the intestinal canal were full of water.

Lycop., bloatedness in consequence of incarcerated flatulence and constipation, with urging to stool; a feeling as if the abdomen must burst; belching without relief; passing flatus downwards relieves; renal colic, where the pain is felt along the ureters into the bladder, especially in the right side.

Merc., colic occasioned by the cool evening air, with diarrhœa, chilliness, and shuddering.

Nux vom., flatulent distention of the abdomen, with pressure upwards into the chest, and downwards upon the rectum and bladder;

would like to belch, but cannot; constant urging to stool without effect, and frequent desire to make water; wind colic, hemorrhoidal, renal, and lead colic.

Opium, when flatulence accumulates in the upper portions of the bowels, causing a distention of the abdomen, especially in the umbilical region, with antiperistaltic motion, belching and vomiting; the bowels seem perfectly closed, but there is a constant urging to stool and to urinate; the pain is cutting, pressive, and twisting; painter's colic.

Platina, painter's colic; pain in umbilical region, extending through into the back; the patient screams, and tries to relieve the pain by turning in all possible positions.

Plumb., frightful pain, particularly around the umbilicus; the umbilicus drawn in towards the spine; obstinate constipation.

Podoph., cramps in the bowels, with retraction of the abdominal muscles, or crampy drawing up of the muscles into lumps and knots; lead colic.

Puls., colic worse in the evening and at night; pale face; white tongue; no thirst; wants to uncover; grayish diarrhœa; tearful disposition.

Rheum, in infants with sour diarrhœa; the child smells sour all over.

Rhus t., worse at night, and when being quiet; better from moving about.

Sabad., sensation as if a ball of thread were moving and turning rapidly through it. "Oh, my bowels! it runs like a wheel!"

Sepia, boring, burning pain, with great distention and sensitiveness of the abdomen; anxiety; typically recurring towards evening; scrofulous persons.

Stann., stitches from both sides through the abdomen and through the hips; worse from slightest motion or touch, and when lying on right side; vomiting of water when smelling any kind of cooking.

Sulphur, spasmodically contractive colic, extending into the chest, the groin, and the genital organs; from piles; from flatulence; from eating sweet things; relieved by sitting bent; psoric individuals.

Tart. em., violent colic, as if the bowels would be cut to pieces; violent cutting and labor-like tearing from above downwards, across the groin through the thighs down to the knees; nausea; accumulation of water in the mouth; shifting of flatulence, with rumbling in the bowels and diarrhœa.

Thuya, hemorrhoidal colic, with very acute and violent pain in the lower bowels; much flatus, with or without stool; feces hard or fluid

and scanty; when fluid there is a sensation in the rectum, as if boiling lead were passing through.

Veratr., abdomen swollen and very sensitive; violent pinching pains; no discharge of flatus either up or downwards; the intestinal canal seems closed; nausea; inability to swallow; cold perspiration; anxiety; restlessness; after eating fruit or vegetables.

Zinc, flatulent colic, worse from wine, towards evening, and when at rest; loud rolling and rumbling; retraction of the abdomen; hot, moist flatus passing off without relief; lead colic.

Tuberculosis Intestinalis, *Consumption of the Bowels.*

Just as tubercles form in the lungs, so they are apt to be deposited into the mucous and submucous membrane of the ilium, and especially into Peyer's and the solitary glands, spreading downwards over the colon, rarely, however, upwards over the jejunum and duodenum. Exactly like tubercles in the lungs and other organs, these consist either of a yellowish, cheesy, or of grayish, half-transparent, so-called *miliary* granulations, which, by a gradual dissolving process, form tubercular ulcers and even perforations of the intestine.

Intestinal tuberculosis is rarely a primary disease, but is generally part and portion of—1. *Pulmonary consumption*, to which it adds the finishing blow. In some cases, however, the intestinal tuberculosis seems so to predominate over the pulmonary complaint that this latter is disguised by the abdominal troubles.

2. In other cases intestinal tuberculosis attends acute miliary tuberculosis; a form of blood-poisoning, which, under the symptoms of typhus, deposits a great number of fine granules in different organs and tissues. It cannot be distinguished from typhus; or, if the deposition within the pia mater causes inflammation there, from a tubercular meningitis.

Lastly, intestinal tuberculosis may be part and portion of tubercular formations within the peritoneum, the mesenteric glands, and the retroperitoneal glands, all of which are difficult of diagnosis.

The symptoms are not at all prominent or characteristic, only when the tubercles commence to dissolve in the last stage, then the obstinate *diarrhœa* is one of the most prominent symptoms. With it is associated great loss of strength, night-sweats, œdema, here and there, and the patients die with all signs of marasmus.

Obstinate diarrhœa, in conjunction with pulmonary tuberculosis, suggests the following remedies: Ars., Bry., Baryta c., Calc. c., Calc.

phos., Carbo v., China, Ferr., Hepar, Nitr. ac., Phos., (Plumbum,) Phos. ac., Puls., Sulph.

Cancer of the Intestines

Appears either in the form of *scirrhus or fibrous cancer*, or as *medullary cancer*, (which is of a softer, marrow-like growth,) or as *alveolar cancer*, (which is of a jelly-like nature, but of rare occurrence.) It originates either within the submucous and mucous coats of the intestines, or the gut is secondarily affected by its spreading from neighboring organs, as lymphatic glands, peritoneum, liver, ovaries, uterus, and so on.

It is found mostly in the rectum; also in the flexura sigmoidea; very rarely in the remaining parts of the colon. The small intestine becomes only secondarily affected. As it grows, it causes a swelling or tumor from the size of an egg to that of a fist; and by its growth gives rise to intestinal obstruction. Nevertheless its diagnosis may in certain cases be one of great difficulty. It may be suggested by partial intestinal obstruction; rarely by total obstruction; also by the general symptoms of cancer-cachexia. Or in younger individuals it may cause intestinal obstruction alone without these general symptoms of cancer-cachexia. Or it may produce merely the general cancer-cachexia without any sign of intestinal obstruction; but in place of it diarrhœa, colicky pain, flatulency, &c.

The main points of diagnostic importance are these: The presence of an uneven, potato-like tumor; the slow but steady development of intestinal obstruction; the peculiar dry and ash-colored skin; the fast wasting away in strength and flesh; and the age of the patient, as cancer very rarely appears before the fortieth year of age.

CANCER OF THE RECTUM is the most frequent in occurrence. At the beginning of its development, when it causes a pressure upon and a consecutive swelling of the hemorrhoidal veins, with occasional bloody discharges, and pain from the os sacrum down into the thighs, it is mostly confounded with hemorrhoides. Later, however, the obstruction of the rectum becomes more apparent by the form of the discharged feces, which appear pressed, flattened, angular, or pass off in small hard nuts like sheep dung. Manual examination reveals now a knotted tumor, which encircles the gut like a ring. In its still further advanced stage this tumor suppurates, and the bursting of blood-vessels may occasion profuse hemorrhages. We sometimes observe in combination with it indurated inguinal glands; and I have

seen a case where hard scirrhous tumors were discriminated even through the glutæus muscles.

Its prognosis is, like that of all cancers, very discouraging.

By means of the following remedies we may succeed in alleviating much suffering:

Apis., Ars., Bell., Carbo veg., Clem., Cann., Graph., Kreos., Hepar, Lach., Phos., Phos. ac., Rhus t., Sepia, Silic., Sulph., Thuya.

Intestinal Worms, Entozoës, Helminthes.

Worms play, in the practice of common doctors and old women, about as important a part as dyspepsia and liver complaint, the unholy trias, wherein consists the practice of a genuine know-nothing in medical science. The symptoms which have been heretofore attributed to worms are of so variable a nature that almost any intestinal irritation and something else too, might be attributed to worms, and yet there is only one sure and unmistakable sign of their presence in the intestines, viz., their occasional passing off with alvine discharges. All other symptoms may be produced just as well by the most heterogeneous affections of the human organism. But symptoms they do produce, that is true, and these symptoms vary according to the kind of worms which infest the intestines. There have been found and described five different species, but only three of them are of practical importance.

1. Oxyuris vermicularis, thread or *seat-worm*, mostly called *ascaris*. This parasite is from two to five lines in length, white, slender, very active. Its head is club-shaped, its tail curved in males and straight in females. The latter are by far the most numerous. They inhabit the rectum principally, and are found more frequently in children than in grown people.

How these little tormentors come into the human intestines has not been ascertained yet. Doubtless they do not originate there; for there have not yet been found any eggs or intermediate phases of the worm. Only this seems to be the positive fact, that they are found more in such children and persons as live principally on farinaceous food.

Symptoms.—By their constant active motions they cause irritation and tickling in the anus, which obliges the child to scratch and rub these parts; in consequence of which we frequently observe a catarrhal inflammation of the mucous membrane of the anus—even blennor-

rhœa—from it; also swelling of the hemorrhoidal veins, with tenesmus. Their inclination to travel in the case of females into the vagina, and in that of males under the prepuce, causes, in these parts, the same intolerable itching and catarrhal inflammations, and may give rise to the bad habit of masturbation.

Cleanliness, injections of cold water, are generally sufficient to remove this irritation by removing the parasites themselves. The nightly restlessness and intolerable itching which sometimes throws children even into fever, relieves Aconit.

2. THE ASCARIS LUMBRICOIDES, *round worm*, is of a cylindrical form, pointed at both ends, six to twelve inches in length, and of the thickness of a goose-quill, thus resembling somewhat the common earth-worm. Its body, however, is half transparent and of a whitish, yellowish, or even brownish hue. There are males and females. The females are more numerous and larger than the males.

This worm inhabits the small intestine, but sometimes it ascends into the stomach, winding its way up into the œsophagus and being discharged through the mouth. In the Surgical Museum, at Washington, I saw a preparation of a larynx, into which a round worm had entered, causing death by suffocation. It may even find its way into the ductus choledochus, or creep into the vermicular process, causing dangerous inflammatory symptoms in these parts.

Symptoms.—They are found sometimes in large numbers without causing any disturbance; but they do sometimes give rise to *abdominal gripings, increased secretion of slime, diarrhœa, vomiting, irregular appetite;* or, they cause reflex or sympathetic symptoms, as, *itching of the nose, anus, genitals; enlargement of the pupils, squinting, increased flow of saliva, restless sleep, with frequent starting and grating of teeth.*

Symptoms like the following: cachectic countenance; blue rings around the eyes; enlarged abdomen, fever, irritation of the brain, fits, convulsions, &c., which have been ascribed to worms, are rather doubtful. In such cases a careful examination will, no doubt, lead to other exciting causes.

Therapeutic Hints.—In the first place there is no need of disturbing the system with so-called vermifuges. Worms won't eat up a child, nor kill anybody, except in those very rare cases where "one of the critters goes into a wrong passage."

Secondly, those symptoms of irritation are easily subdued if we

choose homœopathically between Cina, Spigelia, Sulphur, Bell., and other remedies.

Lastly, as it is most probable that, according to the latest researches, these worms do not propagate in the intestine, but are brought there by means of food, a change of diet might be the best means to prevent their accumulation.

3. TÆNIA SOLIUM or *common tape-worm* inhabits the small intestines. It consists—1. Of *a head* as large as a pin's head; upon its front part we observe four sucking cups, in the middle of each of which is a nozzle or snout, which again is encircled by a double row of hooks.

2. Its *neck* joins the head, and is slender, flat, half an inch long, or more; but exhibits no segmentation.

3. Its *body* consists of a long row of segments, each of which has a rectangular shape, and contains both a male and female organ, the orifices of which are joined at the apex of a lateral papilla. These papillæ are so arranged that each following segment has it on the opposite side, so that they run along alternately from side to side. The size of the segments increases gradually toward the caudal extremity, growing broader and broader; for the parasite is nourished and grows from its head, the newly-created segments pushing those already formed before them, so that the caudal extremity is the oldest portion of the animal, and its segments alone contain ripe eggs. There may be upwards of eight hundred segments, and the worm may measure above ten feet in length. The oldest segments fall off from time to time, and are discharged; if they happen to come into a suitable organism,—for example into that of a pig,—their eggs develop themselves there into the *cysticercus cellulosa of the pig*, (finne.) This, by transplantation into the stomach of man, becomes a tape-worm again. It happens rarely that the intestines of a man harbor more than one of these unwelcome guests at a time, but there are cases on record where two, five, or more, have come away from one individual at one time. They are generally found in those regions where people are accustomed to eat raw or not well-cooked pork.

There is still another kind of tape-worm—

4. THE BOTHRIOCEPHALUS LATUS OR TÆNIA LATA, which, instead of four mouths, has only a pair of fissures on its head; whilst its sexual organs lie in the centre of each segment. Its neck is scarcely distinguishable; and the segments of its body are broader than they are long.

This kind is found only in Russia, Poland and the eastern part of Prussia. All other parts of this globe are inhabited by the common tape-worm. Switzerland only is said (Meyer, Avens) to produce both species.

Symptoms.—Some individuals experience not the slightest inconvenience from it. Others complain greatly of pain in the stomach, nausea, vomiting, ravenous hunger, even unto fainting. The abdomen is sometimes bloated and sometimes contracted. There exists in some cases diarrhœa, in others constipation.

Among the sympathetic symptoms may be mentioned, itching of the nose; headache; dizziness; getting dark before the eyes; noises in the ears; palpitation of the heart, &c.; all which symptoms have no diagnostic value, unless the corpus delicti itself be found.

Chorea, epilepsy and the like, I should not like to set down as effects of tape-worm. This latter has been removed and the other has continued.

All the above-mentioned symptoms caused by worms show this peculiarity, that they are, in a majority of cases, *ameliorated* by certain kinds of nourishment, such as milk, eggs, mild soups, and meat not spiced; and that they are *aggravated* or *brought on* by sour things, especially cucumbers in vinegar and pepper, herring, horseradish, strawberries, cranberries, carrots, and the like. After the eating of these latter things, some segments are generally discharged, and thus the diagnosis in a given case may be settled by way of experiment.

Therapeutic Hints.—If no offence is given, why should we use the cudgel? A number of those above-mentioned symptoms may be relieved by selecting the corresponding remedy, which may even cause the parasite to leave. But in some cases persons have made up their minds to get rid of the "critter," no matter what it costs. As the safest and most expeditious of all the tape-worm remedies, Baehr has recommended—

Kousso, or the flowers of *Brayera anthelmintica,* 2–3 drachms put into a tumblerful of water well stirred, so that none of the flowers swim on the top. This done in the evening, let it stand over night. Administer a cup of coffee before taking it in the morning, to prevent nausea. Then one-half of it is taken, and the other half, half an hour later. If inclination to vomit should set in, it is best subdued by lemon juice.

Within one hour and a half to four hours the parasite is discharged.

5. The tricocephalus dispar, *or thread-worm,* is from one to two inches long, thin like a thread in front, whilst its posterior portion is thicker. It is generally found in the cæcum of persons who died of typhus. There are no symptoms known by which it could be diagnosticated during life.

Special Hints.

Acon., pain in the bowels; the umbilical region is hard, and the whole belly bloated; urging to stool without discharge, or slime only; nausea; accumulation of water in the mouth; or restlessness at night on account of intolerable itching and tingling at the anus, throwing the child into fever; (seat worms.)

Arg. n., periodical pain in the region of the liver and around the navel, with sickness at the stomach, retching, vomiting of tough mucus; menses irregular, but always discharge of thick, black, coagulated blood; gray-yellowish color of the face.

Bell., drowsiness; starting in sleep, grating of teeth, involuntary discharge of feces and urine, or dysuria; squinting.

Calc. c., headache, dark rings around the eyes; pale, bloated face; thirst; thick, bloated belly; aching about the navel; diarrhœa; easy perspiration from motion; scrofulous diathesis.

China, pain in the belly worse at night, after eating; fulness of the abdomen, pyrosis, pressure in the stomach and retching; tremulous weakness all over.

Cicuta, frequent hiccough and crying; pain in the nape of the neck; spasmodic drawing of the head backwards, and tremor of the hands.

Cina, restless sleep with rolling of the eyes, dark rings around the eyes; squinting; enlarged pupils; constant rubbing the nose; bleeding of the nose; face pale, cold or red and hot; loathing of food, or great hunger; nausea; vomiting; pain in the umbilical region; belly hard and distended; constipation; dry, hacking cough at night; feverishness; convulsive motions of head and limbs.

Euphorbia, loss of appetite, or voraciousness at times; furred tongue, feverishness; fetid breath; bloated stomach; constipation or diarrhœa; emaciation, peevishness, wakefulness.

Ferr., pale, wretched complexion, easily flushing; itching at the anus from seat-worms at night; involuntary micturition.

Filix mas, frequently pain in the bowels, a kind of gnawing and boring; constipation; loss of appetite; furred tongue; pale face; blue rings around the eyes; itching of the nose; irritable and cross.

Ign., itching at the anus from seat-worms; convulsions, with loss of consciousness and temporary inability to speak afterwards.

Kousso, indigestion; loathing; sleeplessness; weakness with fainting; profuse and cold perspiration; emaciation; dull pain in the bowels; bloatedness; constipation, tape-worm and other worms.

Lyc., arthritic pain and stiffness; chronic eruptions; wretched, dirty, pale, earthy complexion; flatulence, bloating the stomach and abdomen; sensation of something crawling and moving in the bowels and stomach up and down; constipation.

Merc., continuous greediness for eating; he becomes weaker and weaker withal; bad smell from the mouth; itching of the anus; inflammation of the vulva; seat and round-worms.

Punica granatorum, vertigo, wavering before the eyes, enlarged pupils; yellow complexion; grating of teeth; accumulation of water in the mouth; changing appetite; gulping of watery fluid; vomiting; sensation of something moving in the stomach; bloated bowels; colic; palpitation of the heart; spasms; syncope.

Sabadilla, vomiting of round-worms, or nausea and retching, with a sensation of a worm in the pharynx; or, in case of tape-worm, burning, boring and whirling in the umbilical region; accumulation of water in the mouth; chilliness and sensitiveness to cold; sensation as if the abdomen were sunken in.

Spigelia, nausea every morning before breakfast; always better after breakfast; dilated pupils; squinting; pale face; smarting in the nose; sensation of a worm rising in the throat; better after eating; or vomiting of all she takes, with sour rising like vinegar from the stomach; pain in the bowels; dry, hard cough at night; palpitation of the heart.

Silic., colic in children from worms.

Sulphur, after Acon. or Merc.; creeping in the nose; creeping and biting in the rectum; passage of lumbricoides, ascarides and tænia; nausea before meals, and faintness before dinner; restlessness at night.

Stannum, Hahnemann and others have mentioned it as palliating the symptoms caused by tape and round-worm.

Teucrium is said to be specific against the terrible itching in the anus from thread-worm.

In addition the following remedies may be merely mentioned as vermifuges: Apocyn. andr., Asclep. syr. and tuber., Chelone, Dolich. pruriens, Gelsem., Gnaphal., Helonias, Pod.

Kafka recommends *Extractum filicis maris Æthereum*, from one to five grains per dose every hour or two hours, not, however, on an

empty stomach, but after eating a plateful of fat water-soup; at the same time injections of milk every hour or two. The ætherial extract benumbs the tape-worm, makes it weak and sick, the fat soup it does not like, and so it withdraws itself instinctively from the small intestines into the colon, where the smell of milk acts as an invitation. After three or four doses of the extract, he administers a quick-acting purgative (jalapine) in from two to three grains. After the expulsion of the worm, the patient is allowed to partake of a cup of coffee, or a glass of wine and soup, and go to bed, if he feels weak.

Kurtz recommends Cupr. ac., 10 gr., dissolved in 1 oz. aq. dist. From this solution he orders to be taken on the first day five, on the second six, and so on up to twenty-five drops, in half a cupful of water, night and morning.

For my own part, I don't think such perforce-cures required. A careful selection of the remedies for the individual ailments will always relieve the patient; the parasite then leaves of its own accord an organism which is no longer adapted to its further development, or it is made, after the system shall have become renovated, a perfectly harmless inhabitant.

Diseases of the Peritoneum.

The peritoneum is a serous membrane, and therefore a shut sac, with a single exception in the female, in which case the peritoneum is perforated by the open extremities of the Fallopian tubes, and is continuous with their mucous lining. It invests and envelops all the different viscera of the abdomen, and is then reflected on the parietes. Hence it is perfectly analogous to the pleura in the chest, and the arachnoid membrane in the cranium. Its pathological disorders will, therefore, as we shall see, correspond very closely to affections of the above-named membranes.

Peritonitis.

Its pathological character is like that of pleuritis or of meningitis —injection of the capillary vessels followed by exudation. This exudation is either—

1st. *Of a serous nature*, and then generally profuse, distending the abdomen to a considerable extent. Owing to its serosity, this kind of fluid is very easily reabsorbed. Or the exudation is—

2d. *Of a fibrous nature, coagulable lymph*, at least predominantly so. This is apt to cause adhesion, not only between the layers of the peri-

toneum at different places, (thus forming sacs wherein the remaining fluid is retained,) but it may create, also, strings or bands of fibrin, which fasten one portion of the intestine to another, and which may give rise to strangulations of portions of the intestines. Or the exudation is—

3d. *More or less mixed with blood-globules,* and then it is called *hemorrhagic;* and is mostly found in diseases which predispose to bleeding in different organs: like scurvy, typhus, delirium tremens, exanthematic fevers, and so on. Or the exudation is transformed—

4th. *Into pus* or *ichor,* and then it is called *purulent* or *ichorous.* The latter takes place only under the most unfavorable conditions, where there exists a generally depraved state of the blood: as in puerperal fevers, pyæmia, or when urine passes into the cavity of the abdomen.

It is thus clear that a peritonitis is not necessarily cured simply because the inflammatory symptoms have passed away; its product, the exudation, is still there, and may give much trouble before it is removed.

Peritonitis does not always involve the whole peritoneum, is not always a *general or diffused peritonitis,* but much more frequently it is only *partial, circumscribed,* attacking only single portions of it; for example, those parts which cover the liver, spleen, kidneys, uterus, or portions of the intestines, being more or less complicated with inflammations of these organs.

Its *causes* are various. *Primarily,* it is most frequently brought on by external injuries: a blow, a fall, a penetrating wound, or by surgical operations, or by exposure to cold and wet.

Secondarily, it may be a mere continuation of an already existing inflammatory process of the liver, spleen, womb, bladder, cæcum, &c., or it may arise in consequence of ulcerative processes within the intestines, and subsequent perforations; also childbed fever and menstruation are frequent causes of peritonitis.

Symptoms.

Owing to these diverse causes, it is obvious that peritonitis, considered as a general form of certain morbid processes, must exhibit a great variety of manifestations when we come to consider individual cases. Indeed that is so with all forms of diseases. I can point out only those symptoms which are characteristic of all forms.

1st. *Pain* is never absent, and always severe; it is described as sharp and lancinating, and is increased by the slightest motion or

touch. Therefore the patient lies quietly on his back, with his thighs flexed, breathing only with the thorax, instinctively avoiding all action of the diaphragm. The slightest pressure increases the pain; even that of the bed-clothes seems sometimes unbearable—a distinctive sign between peritonitis and colic.

2d. *Vomiting;* at first, of the usual contents of the stomach, then of slimy and bilious, and lastly of great green masses, as though verdigris had been taken into the stomach. It becomes stercoraceous only when the peritonitis is caused by an obstruction of the bowels. The vomiting never relieves, but increases the pain considerably.

3d. *Singultus* sets in especially if the serous lining of the diaphragm becomes involved in the inflammatory process.

4th. *Constipation*—owing to the paralyzed state of the intestines—is a frequent symptom; but in cases of peritonitis puerperalis, or in combination with catarrhal inflammation, or ulceration within the intestines, there is almost always diarrhœa.

5th. *Meteorismus* and *distention of the abdomen* in consequence of accumulation of gas and fluid.

6th. *Constant desire to urinate; painful micturition or retention of urine;* always where the serous lining of the bladder is involved in the inflammatory process.

7th. *Fever;* more or less intense according to the extension of the inflammation. Gradually, however, as the disease progresses, the pulse becomes small and flickering; the extremities cool, and covered with cold sweats; the features collapse.

8th. *Physical signs* are not very readily elicited, as the patient can bear neither touch nor motion; although, of course, we may expect a dull sound on percussion where there is effusion, and a tympanitic sound where there is meteorism. Auscultation gives no signs, except rumbling in the bowels, which may be heard a yard off.

That it is a dangerous disease we may conclude, if we consider for one moment its nature; and, again, that this danger varies according to the cause and complications of the disease. Simple cases, caused by bruises, taking cold, without other complications, are the least dangerous. Those caused by wounds are more or less dangerous, according to the nature of the wound. And the danger of those which are caused secondarily by other inflammatory processes depends upon the nature of these processes.

It is a good sign when, in the progress of the disease, the pain gradually abates and the pulse rallies. It is a bad sign when the pain abates and the pulse gets weaker and quicker. It is a sign of immi-

nent danger when the pain suddenly subsides and the pulse becomes flickering and the features collapse.

Cases which have become chronic terminate frequently in marasmus and a variety of consecutive sufferings.

Therapeutic Hints.

Acon., hot, dry skin; quick, hard, small pulse; high, inflammatory fever; mouth and tongue dry; great thirst; bitter taste; vomiting; no stool; urine scanty, red, and hot; lower extremities cool; short, quick breathing; very restless; anxious expression in the face; burning, cutting, darting pain in the bowels, worse from slightest pressure, motion, and on lying on the right side; abdomen hot to the touch. After taking cold, drinking cold water when being heated.

Apis, burning, stinging pain in the bowels, very sore to the touch; when exudation has taken place; urine scanty, dark; œdematous swelling of the feet; burning, stinging in the region of the ovaries; metritis.

Arsen., later, when there is a sudden sinking of strength, cold, clammy perspiration, anxious, internal restlessness, insatiable thirst with drinking but little at a time; constant vomiting; burning in the bowels; all worse in the middle of the night.

Bell., after Aconitum, great congestion to the head; strongly pulsating carotid arteries; light and noise unbearable; colicky pains in the bowels; painful retching and vomiting, worse from motion and contact; great anxiety and dyspnœa. Especially when in complication with metritis or perityphlitis.

Bryon., stitching pain or pressing, lancinating in the bowels, worse from slightest motion; when exudation has taken place; tongue white and dry; great thirst; bowels constipated; the patient lies perfectly still, don't want to move. Especially in complication with diaphragmitis.

Calc. c., when about the seventh day a red rash appears; also when the pain is alleviated by cold water applications, so that the patient wants them renewed constantly.

Canth., abdomen burning hot; tympanitic distention in its upper region; lower portion yields a dull sound; bloody, slimy stools, painful, extorting cries; tenesmus of the bladder; strangury; great anguish and restlessness; distressed face; sunken features; cold extremities. Especially when the serous lining of the bladder is the seat of inflammation.

Lachesis, abdomen hot and sensitive to touch; painful stiffness

from the loins down into the thighs; scanty, turbid urine with reddish sediment; strangury; constipation; necessity of lying on the back with drawn-up knees. Especially in complication with typhlitis.

Lycop., in complication with diaphragmitis or hepatitis; when lying on the left side, a feeling as if a hard body were rolling from the navel to that side; or when after three or four days the face assumes a yellowish color; troublesome flatulence and constipation; sleeplessness, and constant loathing.

Merc., at a later period, if the exuded fluid becomes purulent, with frequent starts; creeping chills; perspiration without relief; pale, wretched complexion; foul smell from the mouth; vomiting of slime; and slimy stools with straining; œdematous swelling of the feet; great weakness and emaciation. Especially when in complication with typhlitis and the formation of abscesses.

Natrum, stitching and sticking pains; predominating coldness of the lower extremities; kind of numb and stiff feeling in the affected parts, as if they were made of wood.

Opium, distention of the abdomen; anxiety, with a feeling of flying heat internally, and stupefaction of the head; somnolence; antiperistaltic motion of the intestines; constant vomiting and belching; retention of stool and urine; complete inactivity of the lower bowels.

Rhus t., great restlessness; changing position, notwithstanding the pain it causes; tongue red at the tip; pressive, cutting pain in the abdomen; typhoid symptoms; febris lenta; metritis.

Sulphur, after Acon. and Bryon., or when the disease takes a protracted course.

Veratr., vomiting and diarrhœa; coolness of the skin; sunken features; pulse small and weak; thirst great; restlessness and anxiety.

Ascites, *Dropsy of the Peritoneum.*

Its pathological character is like that of hydrothorax, a collection of fluid within the peritoneal sac, which is of a yellow, or yellowish-green; or (if blood be mixed with it) of a reddish color; contains a great deal of albumen, saline constituents, and flakes of coagulated lymph. The quantity of fluid sometimes exceeds forty pounds. The peritoneum is opaque, without lustre; thickened, but without any sign of inflammation. Liver and spleen are pale, sometimes smaller than normal; the kidneys appear anæmic; and the diaphragm is pushed upwards into the thoracic cavity.

Dropsy of the belly is never a primary disease, but always the con-

sequence of some morbid action, such as diseases of the lungs, heart, larynx, blood-vessels, liver, spleen, kidneys, intermittent fever, and cancer-cachexia.

It may result from mere local troubles, such as impediments of circulation within the peritoneum by obstructions of the vena porta; cirrhosis, and tumors of the liver; tubercular and carcinomatous degeneration of the peritoneum. Frequently several of these causes are in operation.

Symptoms.

1. *Swelling of the abdomen.* This alters its form according to the position of the patient. When standing, the hypogastric region swells out the most; when lying, the most dependent portion of the abdomen bulges out. This distinguishes ascites from any other swelling within the abdominal cavity.

2. *Fluctuation*, which is easily discovered by palpation.

3. *Diminution of urinary secretion and alvine evacuations*, (the latter excepted, where there is an intestinal catarrh co-existing.)

4. *Dull percussion sound*, also variable according to the patient's positions.

5. *Pressure towards the thoracic cavity*, with dyspnœa and palpitation of the heart.

The prognosis depends entirely upon the nature of its cause. If that is not removable, it is hardly to be expected that its consequences will be.

In our *therapeutic* management of each individual case, therefore, we shall have to select remedies from those which are indicated for dropsical affections in general; as, Apis, Ars., Bry., China, Dulc., Led., Lyc., Phos., Puls., Rhus t., Sep., Stront.

Vomiting and diarrhœa suggests Ant. cr., Tart. em., Apis, Arg., Ars., Asar., Borax, Cham., Cupr., Ipec., Merc., Phos., Senega, Sulph., Ver.

Ulcers on the legs, Ars., Graph., Hell., Lyc., Merc., Rhus t., Scilla, Sulph.

Œdema of the lower limbs, with constant oozing out of the water from sore places without formation of pus, Rhus t., afterwards Lyc.

Cough, with dropsy, Amm. c., Apis, Ars., Colch., Hell., Nitr. ac.

Special Hints.

Apis, urine scanty, dark, like coffee-grounds; thirstlessness; great soreness of the abdominal walls; stinging, burning pains in different parts of the body; can't get breath except when sitting; even lean-

ing backwards causes suffocating feeling; in complication with scarlet fever, uterine tumors, and inflammatory processes of the bowels.

Apocyn. cann. has been given abundantly by western physicians for "dropsy" of all kinds; it seems to be indicated by a sinking feeling at the pit of the stomach; an irritable condition of the stomach, that cannot retain even a draught of water; muddy urine; diarrhœa; bloatedness of the face after lying down, passing off after sitting up; dropsy after scarlatina.

Arsen., complexion pale and earthy, or greenish; great weakness, exhaustion; faint feeling from slight motion; tongue dry; great thirst, with frequent drinking, but only little at a time; suffocative spells, especially at night; great anxiety; must jump out of bed; skin cool; burning heat inside; post-scarlatinal dropsy; in complication with heart diseases.

Aurum has been recommended when ascites is the consequence of functional disturbance of abdominal organs, in combination with albuminuria.

Bryonia, congestion of the head; giddiness when rising after stooping; loss of breath when moving in the least; lower eyelids œdematously swollen; lips bluish; great thirst and scanty urine, with burning in the urethra, passing off drop by drop; obstinate constipation; after scarlet fever.

China, indicated in organic disturbances of liver and spleen, and after loss of blood.

Convulvulus arvensis, constipation; abdominal disturbances, weakness, appetite good; he would eat more if there were more room, the abdomen being filled with water; urine almost entirely suppressed.

Digitalis, difficult micturition; pale face; intermitting pulse; cold skin; doughy swelling, which easily yields to the pressure of the finger.

Fluor. ac., enlarged and indurated liver, in consequence of drinking whiskey.

Helleb., in acute cases; after scarlet fever; drowsiness; slow in answering questions; griping in bowels, with jelly-like discharges; frequent but scanty micturition; great thirst; fever.

Kali c., in complication with liver and heart affections.

Laches., in complication with liver, heart and spleen diseases, scarlet fever; *black*, scanty urine.

Lycop., liver affections; abuse of alcoholic drinks; after venesection; intermittent fever; oozing out of water from sore places in the lower extremities, without formation of pus; urine scanty, with

red sediment; upper portion of the body emaciated, lower enormously swollen; one foot cold, the other hot; restless sleep; cross when getting awake.

Manganum oxydatum, intermittent fever; cachexia; palpitation of the heart, strong, irregular, tumbling, without abnormal sounds.

Merc., in consequence of organic lesions of the liver and other abdominal viscera; the swelling of the abdomen is tense, hard; thirst not prominent.

Senecio, abdomen very tense; lower extremities œdematous; urine scanty and high colored, or alternating with profuse and watery discharge; pain in the lumbar region and in the ovaries.

Sulphur, after suppressed itch, rough skin; bluish spots; sleep, with moaning; quick pulse; cold feet; easily sweating, especially in the face; painless diarrhœa; drawing together of the fingers; very forgetful; inclination to sit still and to lie down.

Tympanites Abdominalis

Corresponds to *Pneumothorax*, and consists of a collection of gas within the peritoneal sac. It is caused by ruptures or perforations of the stomach, or of the intestines, in consequence of which the gas which is contained therein diffuses itself within the peritoneal sac. More rarely, the air finds its way into the abdominal cavity from out of the lungs, (in consequence of abscesses and pneumothorax;) and still more rarely, it enters from the uterus or the vagina in consequence of destructive processes in these organs. Cases have been observed where the gas originates within the peritoneal sac itself, in consequence of a decomposition of ichorous fluids contained therein, especially in combination with puerperal peritonitis.

Symptoms.

Swelling of the abdomen. Its development is rapid if it be caused by perforation; slower, if by gradual decomposition.

Full tympanitic sound all over, even in the region of the liver. This organ is pressed backwards, if it be not adherent to the diaphragm; this is quite characteristic, and serves to distinguish tympanites from meteorism, *i. e.*, a collection of gas within the intestines.

All signs of peritonitis, which develops itself soon after the entrance of air into the peritoneal sac.

Therapeutic Hints.—Compare Peritonitis and those other affections of which it is a mere consequence.

Diseases of the Liver.

Physical examination. The upper part of the liver extends into the space between the fifth and fourth, sometimes even to the edge of the fourth rib. Being, however, overlapped here by the lower edge of the right lung, which reaches down to the sixth rib, we find on percussion the perfect, dull liver-sound, commencing only from the sixth rib, whilst above it to the fourth rib the dull sound can be elicited only by hard strokes, sounding through the layer of the lung-tissue that covers the liver. Inferiorly the liver reaches to the tenth rib in the right hypochondrium, whence it ascends in a somewhat semi-lunar line across the epigastrium, midway (or often a little higher than midway) between the ensiform cartilage and the navel, towards the left hypochondrium. Percussion in a horizontal line from the ensiform cartilage towards the left, a little under the region where the apex of the heart strikes, tells us how far into the left hypochondrium the left lobe of the liver reaches.

This normal position, however, may be changed without indicating any disease of the liver itself. The liver is dislocated *downwards* by emphysema, pleuritic effusions, pneumo, pyo or hydrothorax of the right lung; it is dislocated *upwards* by fluid or gaseous collections, or tumors within the abdominal cavity, or in consequence of a shrinking of the right lung. Its surface becomes *grooved* by tight lacing of corsets and waists of petticoats in females, and of pantaloons in males. Part of the right lobe may, by this long-continued process, be brought down to the anterior superior spinous process.

In speaking of the several liver complaints, I shall bring to notice, 1, those which affect the *substance of the liver* or its *parenchyma*; 2, those which have their seat in the *biliary ducts;* and, lastly, those which originate in its *blood-vessels.*

1. Diseases of the Hepatic Parenchyma.

Hyperæmia, *or Congestion of the Liver.*

Pathologically, the liver is overfilled with blood, more or less enlarged; its surface is smooth, tense, glistening and firm to the touch; if cut, black blood oozes from it, and its parenchyma appears of a dark hue.

Its most frequent cause is an impediment in the circulation of blood, in consequence of diseases of the heart and of the lungs. To the first belong diseases of the mitral and tricuspid valves; and to the latter pneumonia, pleuritic effusions (not so frequent) and emphysema.

Another cause is more general morbid processes of the organism, as, intermittent fever, typhus, exanthematic fevers, puerperal fevers, scurvy, &c. But these do not invariably produce such results. Likewise we find it often in connection after suppression of menstrual and hemorrhoidal discharges, and it either precedes or succeeds a number of complaints which befall the liver specifically, of which we shall speak hereafter. Lastly, it is said to be much more prevalent in hot than in temperate climates.

Its *symptoms* are, heaviness, tension, pressure in the right hypochondrium, frequent gastric derangement, nausea, vomiting, headache, depression of spirits.

Palpation and percussion reveal an enlargement of the organ, but of a perfectly normal shape. The volume, however, frequently changes.

Therapeutic Hints.

Bellad., high fever; congestion of the head; severe headache; vomiting of a watery, slimy, and bilious fluid; great thirst; region of the liver painful and sore to the touch.

Bryon., bilious vomiting; bitter taste; white tongue; great thirst or only dryness in the month; inclination to keep still; soreness of the liver to pressure; costiveness.

Cham., after anger or chagrin; very annoying pressure in the region of the liver; colicky pains in the bowels; vomiting of bile; feverish restlessness; crossness; icteric color of the face.

China, pale, wretched complexion; diarrhœa, worse at night or after eating; sensitiveness to external cold; great weakness and lassitude; after severe illness, loss of vital fluids, or abuse of mercury.

Ignatia, after grief or fright, especially in the female sex; menstruation profuse and irregular; leucorrhœa, with bearing-down pain.

Merc., bad taste; bad smell from the mouth; tongue white, flabby, showing the imprints of the teeth; feverishness; sweating without relief.

Nux vom., fulness; pressure; stitches in the liver, worse from motion or contact; swelling of the liver; yellow color of the face, especially if the color of the face is florid with a yellowish tinge; all worse in the morning; great irritability and hypochondriac mood; costiveness.

When this congestion becomes a chronic stagnation of blood in the liver it gives rise to what is called—

Nutmeg Liver.

It consists of an enlargement of the venous capillaries of the liver, which, being filled with venous blood, look dark, whilst those portions of the parenchyma around them look lighter, in some cases, where there is an accumulation of bile, even yellowish, thus giving the liver, when cut, a variegated, nutmeg-like appearance. This shines even through its surface; we see dark and light dots and stripes close together.

In its highest degree it seems that the liver shrinks again; the parenchyma loses its proper nourishment; it becomes granulated, and the surface, which was at first tense and smooth, becomes wrinkled and thickened. This has been termed—

The Atrophic Form of Nutmeg Liver.

Nutmeg liver is always the consecutive symptom of heart and lung diseases, which cause a continuance of impeded circulation; such are, insufficiency of the mitral and tricuspid valves, and hydropericardium, emphysema, cirrhosis of the lungs, large pleuritic effusions, &c.

Its symptoms are, enlargement of the liver, which is discernible by palpation and percussion; more or less yellowish tinge of the skin mixed with the bluish hue of cyanosis, in consequence of heart disease; more or less dropsy of the abdomen and the lower extremities; weight in the right hypochondrium—pressure upon it gives pain; a number of gastric symptoms and hemorrhoidal complaints.

Therapeutic Hints.—Compare those disordered states of the heart and lungs, of which it is more or less a consecutive symptom. Compare also acute and chronic catarrh of the stomach and intestines. Besides all this, a special study require—

Lachesis, cannot bear tight clothes around the waist; has even to loosen the night-jacket to relieve the oppression, which is occasioned even by laying the arm on the body; tension; contractive tightness in the region of the liver.

Laurocerasus, distention of the region of the liver, with pain as from subcutaneous ulceration, or as if an abscess would burst; earthy complexion; yellowish spots in the face.

Lycop., tension around the hypochondria as from a hoop; sore

aching in the region of the liver, as if caused by a shock, worse from contact.

Nux moschata, feeling of heaviness in the region of the liver; swollen liver; bloody stools.

Podophyllum, fulness, with pain or soreness in the right hypochondrium; chronic hepatitis, with costiveness; the patient is constantly rubbing and stroking with his hands the hypochondriac regions.

Compare also Sulphur and Sepia.

Hepatitis, *Inflammation of the Liver.*

This has been divided into—

A. Perihepatitis,

Which is nothing more nor less than a partial peritonitis, viz.: that portion of the peritoneum which covers the liver. I shall not repeat here what I have said already under the head of Peritonitis.

B. Hepatitis Parenchymatosa seu Suppurativa,

However, is an inflammation of the substance of the liver itself. It never involves the whole organs at once, but only parts of it here and there; which, in their centre, are soft and yellowish; at their periphery they show hyperæmia, swelling and softening of the liver tissue. In the progress of the disease little pus globules form in the middle of the inflamed spot, they increase in number, unite and form a small abscess, which again unites with other small abscesses, and thus, in the course of time, the greater part of the liver may become an irregular cavity filled with pus.

Such abscesses are found much more frequent in the right than in the left lobe. When they reach the surface of the liver, they break through and discharge their contents into the abdominal cavity; or, if the surface of the liver has formed adhesions, in consequence of previous inflammation, with neighboring organs—either with the abdominal walls, the diaphragm, the stomach, the gall-bladder, or one part of the intestines—it perforates these organs, and discharges itself either through the abdominal walls, or into the thoracic cavity, stomach, gall-bladder, or intestines, according to its situation and adhesion.

Hepatitis is primarily a very rare disease, and is mostly brought on by external injuries—a fall, a blow, a wound, &c.

Secondarily it is caused by the irritation of hardened concrements within the gall-ducts, or by ulcerative processes within the stomach

and the intestines, which perforate and spread upon the surface of the liver.

In tropical climates it has most frequently been found in connection with dysentery.

Pyæmia, in consequence of wounds on the head or on any other part of the body, is also a cause of it.

Symptoms.

A *primary* hepatitis caused by a blow, fall, or other mechanical injury occasions pain in the right hypochondrium; frequently very acute, as its lining portion of the peritoneum is likewise inflamed; it is worse from any motion. There is also pain in the right shoulder, and on tension, in the right straight abdominal muscle. The liver is swollen; the skin more or less yellowish discolored, (icterus;) fevers, alternating with rigors.

A *secondary* hepatitis, in the course of ulcerative processes in the stomach and intestines, manifests itself by shaking chills; pain in the liver; swelling of the liver; and icterus.

Hepatitis in consequence of pyæmia manifests itself likewise in swelling of the liver, icterus, and shaking chills. Formation of abscesses on the convex portion of the liver often bulge out, and may be detected by palpation. Those on its concave side compress the portal vein, and cause swelling of the spleen, and ascites.

Small abscesses may pass over without any marked symptoms. Large abscesses cause fever; shaking chills; wasting away; cachectic appearance.

Perforation through the abdominal walls, after previous adhesion of the inflamed portion of the liver with the abdominal parietes, is the most favorable; as, in this case, the pus is discharged outside.

Perforation into the pleural sac causes pleuritis; a perforation into the lungs causes the pus to be expectorated; a perforation into the pericardial sac causes pericarditis, which is fatal. If the perforation takes place into the stomach, it is thrown up; and if into the intestines, it is discharged through the bowels.

All this shows that hepatitis and its consequences must cause quite a variety of symptoms; that its prognosis generally is unfavorable; and lastly, that a successful treatment, without a close study of the individual case, is quite impossible. Still, if taken *cum grano salis*, I may mention the following remedies, which have proved themselves more or less beneficial in abscesses of the liver: Bell., Bryon., Lach., Nux v., Puls., Ruta, Sepia, Silic., Kali c., Merc. sal., Hepar, China.

Special Hints.—Compare what has been said under the head of Peritonitis.

Arsen., painful bloatedness in the right hypochondrium, with violent burning pain; violent thirst; vomiting of black masses; black stools; burning heat of the skin; anxiety and restlessness; very quick pulse; perforation into the stomach or intestines.

Bell., especially with acute pain in the region of the liver; worse from pressure, breathing, coughing, and lying upon the right side; extending upwards towards the shoulder and neck; congestion of the head; getting dark before the eyes; fainting and giddiness; bloatedness of the pit of the stomach; tension across the epigastrium; agonizing tossing about; sleeplessness, or wanting to sleep, with inability to get to sleep.

Bryon., burning and stitching pain; worse from motion and contact; after chagrin; fulness of stomach and abdomen; pain in the right shoulder; yellowish face; white tongue; great thirst; constipation.

Chelidon., crampy pain in the inner angle of the right shoulder-blade; shooting pain from the liver into the back; pressive pain in the back part of the head, towards the left ear; pressure in the eyeballs; bitter taste in the mouth; nausea; palpitation of the heart, with very quick and irregular pulsation, and without abnormal sounds; constipation.

China, pain as from subcutaneous ulceration, worse from touch; liver swollen; diarrhœa; distended veins on the face and head.

Hepar, when suppuration takes place.

Kali c., pain through to the back; abscess; dryness of the skin.

Lachesis, after Bell. or Merc., very sensitive to any pressure upon the hypochondriac region; much flatulence; palpitation of the heart; formation of abscesses.

Leptandra, yellow-coated tongue; constant nausea and vomiting; aching in the region of the liver; dark-brownish urine; black stools.

Lycop., in rather slow cases; complication with pneumonia; fan-like motion of the nostrils when breathing; one foot hot, the other cold.

Merc., pressive pain and stitches in the liver; inability to lie on the right side; when coughing or sneezing, a stitch runs directly through the chest to the back; yellowish tinge of the face; perspiration without improvement.

Nux v., pain, stitch-like, or throbbing, or pressive; worse from external pressure; sour or bitter taste in the mouth; nausea; vomiting; shortness of breath; the dress seems oppressive; the removal of it,

however, does not relieve; great deal of headache. Previous use of allopathic medicines, coffee, liquor, &c.; sedentary habits.

Puls., spells of great anxiety at night; green, slimy diarrhœa; thirstlessness.

Silicea, hardness and distention of the region of the liver; throbbing, ulcerative pain, increased by contact and motion; formation of abscesses.

Sulphur, especially after Nux v. and Merc.; red tip of tongue; red lips; sleeplessness.

Cirrhosis, *Hob-nail Liver, Interstitial Inflammation of the Liver, Granulated Liver.*

Its pathological character. It is a chronic inflammation of the areolar tissue, which, being of a fibrous texture, forms a capsule over the whole liver, and which likewise enters the liver as Glisson's capsule with the portal vein, lining all its ramifications throughout the whole organ. The next consequence of inflammatory action of this tissue is exudation of coagulable lymph, which forms new areolar tissue and adhesions between those ramifications of minute vessels, and causes the secreting cells of the liver to become isolated and compressed, and in this way forms those larger and smaller granulations, which have been compared to hob-nails. In the further progress, this new formation compresses also the biliary ducts and blood-vessels, and the whole organ shrinks, becomes hard, tough, pale, anæmic, and, if cut, appears tinged with bile throughout. Its most frequent cause is the abuse of *alcoholic drinks;* still it has been observed in individuals who were not addicted to drinking, and where it seemed to be in connection with intermittent fever, suppressed menstruation, poor living.

Heart diseases, according to Bamberger, do not cause it. It is much more frequently found in males than females, rarely in children, and most frequently between the ages of thirty and forty-five years.

Symptoms.

1. The liver is, during the stage of exudation, considerably enlarged, and, during the stage of granulation, loses quite considerably in bulk, so that the left lobe disappears entirely. If we have an opportunity to observe its progress long enough, we can witness this increase and gradual decrease of the liver, and in this way gain one of the most important aids in our diagnosis.

It is almost always connected with—

2. *Enlargement of the spleen*, in consequence of the obstructed circulation of blood within the portal vein and its branches, which impairs the free reflux of blood through the vena lienalis. This is an early symptom.

3. *Ascites* appears later, and depends upon the same obstruction of the portal circulation; still later *œdema* of the lower extremities occurs.

4. *Meteorismus*, if strongly developed, causes difficulty in breathing.

5. *Dilatation of the abdominal veins*, which, however, does not appear until after an advanced stage of the disease. It is caused by the obstructed portal circulation. The blood in its way from below being stopped, forces its way through neighboring veins, widening and dilating them, and thus forms a collateral circuit around the liver, until it reaches the vena cava. These widened and dilated veins appear sometimes like a large net-work over the walls of the whole abdomen, and even above it.

6. *Functional disturbances of the intestinal canal* are of a varied nature. The appetite is, in some cases, not altered till very late; in others, again, want of appetite, nausea, belching of wind, and vomiting predominate. In cases of severe obstruction in the portal circulation we find vomiting of blood and bloody stools.

7. *Loss of flesh and strength sets in quite early*, as a necessary consequence of imperfect circulation.

8. *Jaundice* is, according to Bamberger, quite a prominent symptom of cirrhosis; and, contrary to the opinion of other writers on this subject, it is almost always found, and sometimes even in a high degree. And it is not to be wondered at that it is so, when we remember the pathological character of the disease, which proves that the whole gland is made unfit for biliary secretion.

If we consider these symptoms, together with the preceding abuse of spirituous liquors, we shall be enabled, in most cases, to make out a sure diagnosis. But for the sake of *differential diagnosis* I shall compare a few forms of diseases which might be confounded with it.

Stricture of the biliary duct is usually caused by gall-stones, and has its peculiar colicky spells, but no swelling of the spleen.

Nutmeg liver is always the consequence of heart and lung diseases, and has no enlargement of the spleen.

Cancer and tuberculosis of the peritoneum, with highly-developed ascites, may be sometimes difficult to discern; still we have here a quicker wasting away; perhaps also signs of cancer or tubercles in

other organs, and a development of œdema of the lower limbs prior to the development of ascites; whilst in cirrhosis we have first ascites and afterwards œdematous swelling of the lower extremities.

Cancer of the liver distinguishes itself by the peculiarly potato-shaped surface of the enlarged liver and the normal size of the spleen.

Hydatids of the liver give, on palpation, the sense of fluctuation; they do not impair the general nutrition, nor do they cause an enlargement of the spleen.

Inflammation of the portal vein, with coagula forming in it, is a much more rapid process, and is not caused by previous abuse of spirituous liquors.

Inflammation of the areolar tissue surrounding the biliary ducts is characterized by the highest degree of icterus and the complete discoloration of the stools.

Colloid or fatty infiltration of the liver never decreases in size, causes no icterus, and is found in scrofulous, rhachitic, or syphilitic individuals, or as consequence of mercurial poisoning.

Prognosis is favorable as long as the disease is still in its first stage. After granulation has formed throughout the organ I do not believe that its parenchyma can be reorganized.

Therapeutic Hints.—If the disease is brought on mainly by the abuse of spirituous liquors, especially whiskey and brandy, the first prescription, of course, must be, "stop drinking." And, in order to destroy the appetite for alcoholic stimulants, our second prescription should be, "drink milk," and nothing but milk; live on milk-diet. After this we shall have a choice between these remedies, which are antidotes to alcohol: Nux v., Bryon., Puls., Carbo v., Sulph., Ars., &c.

In its second stage we must be guided entirely by the characteristic symptoms of the individual case.

Syphilitic Inflammation of the Liver.

Like hepatitis, never attacks the whole organ at once, but only single spots of its parenchyma. Its exudation is partly coagulable lymph, and partly a peculiar, cheesy, grayish, whitish, or yellow mass. In its healing process the parts cicatrize, and the cheesy mass becomes encased, where it remains unaltered or is gradually converted into a chalky mass. These cicatrices cause constrictions in different parts of the liver, so that the organ exhibits the uneven appearance of

scattered nodules. The disease generally causes partial atrophy of the liver, and, therefore, is very similar to cirrhosis. In those cases, however, where there is colloid infiltration of the liver, the liver is enlarged. In some cases the disease does not manifest itself at all during the lifetime. Still, where there is constitutional syphilis and nodosity of the liver, it may be suspected. After all, the knowledge of its character has more of an anatomic-pathological importance, and, by a careful selection of remedies corresponding to the individual symptoms of the case, it may be treated and cured without the slightest suspicion of its existence.

Acute Yellow Atrophy

Consists in a rapid diminution in the size of the liver in all its diameters, especially that of its depth, in consequence of an acute degeneration of its parenchyma. This is infiltrated throughout with bile, which gives to the whole a deep saffron-yellow appearance. The surface of the liver becomes wrinkled, and the gall-bladder shrivelled, containing but a small quantity of thin, pale bile.

The microscope reveals the destruction of the secreting cells of the parenchyma; and in their places, fat-globules and decayed remnants of those cells.

This disease is of rather rare occurrence; it has been observed, however, after deep mental emotions; after excesses in venere, poor living, and also in the last months of pregnancy.

Its progress is acute and rapid, terminating in twenty-four to forty-eight hours, sometimes in four to five days, and exceptionally in eight to fourteen days.

It exhibits the *following symptoms:*

1. *Icterus*, which is never absent, and which may make its appearance some time before other urgent symptoms, and sometimes sets in later.

2. *Brain symptoms:* headache, dizziness, sopor. Pupils at first are contracted; later, dilated; features indifferent, or distorted by spasmodic action; grating of teeth; chewing motions of the jaws. There are in some cases involuntary discharges of stool and urine, and in others no discharges at all, so that the full bladder has to be emptied by the catheter.

Instead of this stupor, there is in some cases violent agitation, delirium, tremor, spasm, &c.; whilst in still other cases such excitement alternates with stupor.

3. *Fever,* more or less violent, sometimes setting in with a chill. In cases of jaundice it is always a suspicious symptom. The pulse is usually frequent, but during deep sopor it becomes full and slow.

4. *Gastric derangements;* they consist in nausea, vomiting—even of bloody secretions—in consequence of erosions into the stomach; also bloody discharges from the bowels.

There is also more or less meteorism of the bowels.

The most characteristic symptom, however, is—

5. *The rapid decrease in the size of the liver;* which may be ascertained by percussion, and which is first discoverable by the tympanitic sound over the left lobe of the liver; which, as in cirrhosis, dwindles away first.

Its diagnosis is in some cases very difficult, as it may easily be confounded with typhus. Indeed there is only one unmistakable sign: the just-named *rapid decrease in the size of the liver.*

Therapeutic Hints.

Acon., acute, feverish icterus, especially during pregnancy.

Bell., congestion to the head; headache; dizziness; sopor; pupils at first contracted, and afterwards dilated; spasmodic jerkings; grating of teeth, &c.

Bryon., chill first and fever afterwards; typhoid symptoms; bitter vomiting; constipation.

Calc. c., chewing motion of the jaws during sleep.

Ipec., vomiting of blood, and bloody discharges from the bowels.

Leptandra, delirium; complete prostration; heat and dryness of the skin; coldness of the extremities; fetid and tarry stools; tongue thickly coated, with a black streak down the centre.

Compare also Hemorrhage from the Stomach and Bowels, and also Jaundice.

Hepar Adiposum, *Fatty Liver.*

Its anatomical character consists in enlargement of the whole organ, a smooth, glistening and transparent, tensely drawn peritoneal surface; at the same time a doughy consistency, leaving on pressure the imprint of the finger. Its outside and inside are of a yellowish-red or even pale-yellowish color, the whole being infiltrated by a fatty substance, which adheres to the knife, when cutting through, if it be sufficiently warm.

This fatty degeneration of the parenchyma cells takes place under two distinct opposite conditions:

1. In consequence of a *defective general nutrition,* which is attended by general decline and marasmus.

2. *In consequence of overfeeding the organism,* which is attended with fatty deposits in the subcutaneous areolar tissues, in the omentum, and in different internal organs.

In the first place, we find the fatty liver most frequently connected with tuberculosis of the lungs and other organs, and with cancer-cachexia. In the second place, it becomes the property of those indolent persons who eat much, and drink a glass of whiskey in order to digest better; who sleep long, and move slowly mentally and bodily. (The fatty liver of the goose is produced artificially on the same principle: by poking a kind of dried noddles down her throat, and preventing her from moving about.)

Its symptoms are not at all marked; even its physical signs reveal only an enlargement of the liver.

Its treatment falls, in the one case, under that of tuberculosis and cancer-cachexia; and in the other, it must consist in regulation of diet and habit.

Colloid Liver, Speck Liver, Waxy Liver, Albuminous Degeneration of the Liver, Scrofulous Liver.

Its pathological characters are the following: Considerable enlargement of the whole organ; in extreme cases greater than in any other liver complaint, with the exception of cancer, filling almost the whole abdomen; a smooth, tensely-drawn, peritoneal surface; an elastic consistency, which, on pressure, leaves no imprints. Its substance is of a grayish, whitish, or reddish-gray, or yellowish color; and, on being cut, shows a smooth, almost homogeneous mass, which has been compared to wax if yellowish, and to pork if of a more whitish color. It leaves, however, scarcely any trace of fat on the knife. When examined under the microscope this mass appears glassy, transparent, filling the parenchyma cells, which gradually become obliterated.

This affection is the result of severe constitutional disorders alone, such as constitutional syphilis, mercurial cachexia, long-continued intermittent fevers, scrofulosis, rhachitis, osteomalacia, Bright's disease, and chronic dysentery.

Symptoms.

Increasing very slowly and without pain, the original disorder covers all its symptoms, until it attains such a size that it can be easily diagnosticated by percussion and palpation.

It causes no ascites, because, like fatty liver, it offers no obstruction to the portal circulation. If ascites exists at the same time it is caused by a concomitant colloid degeneration of the kidneys. General dropsy is the consequence of the original complaint. The feces are almost always discolored, clayish, as in icterus, probably caused by want of coloring substance in the very thin bile, but there is no icterus. Our diagnosis of a colloid liver must, therefore, be based upon the presence of a largely-increased liver, which attained slowly that size, and without pain in connection with one of the above-named dyscrasias.

Therapeutic hints, for obvious reasons, cannot be given.

Carcinoma Hepatis, *Cancer of the Liver.*

There are three different forms of cancer of the liver:

1. *The carcinoma fasciculatum*, a rare form, characterized by the pale, yellowish-red color, its glassy, transparent mass, which is enveloped in a bag of fibrous tissue.

2. *The alveolar cancer*, the rarest of all, which is characterized by its jelly-like substance, developing itself within the areolar tissue around the ramifications of the portal vein.

3. *The medullary or encephaloid cancer*, the most common form, is characterized by its marrow-like substance, which is mostly of a whitish color; sometimes it is red from hemorrhagic effusion, and, at other times, dark, even black, from a deposition of pigment. It appears more or less as uneven nodules of various sizes, which, for the most part, have a hard feel; although, in some cases, the sense of touch may detect fluctuation. They increase more or less rapidly in size, and sometimes undergo changes of fatty degeneration; or, in still rarer cases, of softening and decay, or formation of ichor.

We do not know any cause for this malignant disease. It is found sometimes as a primary affection of the liver, but more frequently it accompanies cancerous deposits in other organs. Its most frequent occurrence and its most rapid development have been observed after extirpation of cancerous growths from other organs, especially from those of the mammæ. Persons between the ages of fifty and sixty years are most liable to its invasion.

Symptoms.

1. *Enlargement and uneven surface of the liver.* Its size is sometimes enormous, reaching far over into the left hypochondrium and far down into the abdomen; in fact, no other disease except that of

colloid liver causes such extensive enlargement of this organ. Its enormous size presses out the right hypochondriac region, and its uneven surface is then easily detected by inspection and palpation.

In such prominent cases there is no difficulty in the diagnosis. But there are cases where those morbid nodules lie out of the reach of palpation, either deep in the substance of the liver, or on its opposite surface. So is also the enlargement of the liver at the beginning of the disease very inconsiderable; and, in cases of few and small cancerous deposits, attended with general anæmia and marasmus, the liver may appear even smaller.

2. *Tenderness in the region of the liver,* which is almost always manifest, at least on deep pressure, but it varies much in degree. A radiating pain towards the spine and the right shoulder-blade, as in other liver complaints, is a frequent attendant of this disease.

3. *Icterus* is likewise a frequent attendant of the disease, occasioned by the pressure of the morbid mass upon the biliary ducts; but it is by no means an invariable one. When this sign is present, however, the skin generally has a peculiar ash-colored, dirty-yellowish hue, and, being dry and brittle, it peels off in minute little scales.

4. *Ascites* results only in those cases where the morbid mass is sufficiently large, and so situated that it impedes the portal circulation, by pressure upon its vessels, or it comes and grows with general dropsy.

5. *Disturbed nutrition and gastric symptoms* are almost always present, and show nothing characteristic of this complaint.

6. *Fever* is, as a rule, quite slight, amounting at the most to febrile motions. Where we find high fever, it is occasioned by some other complication.

We see, then, that the diagnosis of cancer of the liver is by no means always easy. Where the characteristic enlargement and uneven surface of the liver has not yet been developed, (in the incipient state of the disease,) or where it does not develop itself, (in cases of general anæmia and marasmus, or where the diseased part occupies the posterior part of the liver,) in such cases we will have to balance the following points:

1. *Can it be colloid liver?* No; because it is not the result of syphilitic or mercurial cachexia, &c. See Colloid Liver.

2. Can it be *fatty liver?* No; because it is not the result of tuberculosis or over-feeding.

3. *Can it be syphilitic inflammation of the liver?* No; because there is no constitutional syphilis present.

4. *Can it be cirrhosis?* No; because there is no enlargement of the spleen.

5. *Can it not be nutmeg liver?* No; because there is no heart or lung disease for its foundation. After having thus narrowed the field of possibilities, we now observe, in addition, *swollen jugular glands*, which Virshow considers of great diagnostical importance, we ascertain whether *there is any cancerous formation in any other organ, or a hereditary tendency to it.*

Further, it is among the rarest events, that cancer of the liver coexists with tuberculosis, organic heart-diseases, typhus or acute exanthematic fevers; whilst, on the contrary, it is frequently found simultaneously with Bright's disease of the kidneys, and other cancerous affections, especially of those within the abdominal cavity. Finally, we consider the age of the patient. Cancer scarcely ever happens before the thirty-fifth year of age; usually between the years of fifty to sixty.

Therapeutic hints are rather a scarcity in this complaint. I do not know of a well-attested case, that ever has been made known as cured. The principal remedies promising the best alleviating results are: Arsen., Bell., Carb. an., Con., Hydrastis, Lyc., Sepia, Silic.; and others according to special indications.

Hydatids of the Liver, *Echinococcus-cysts.*

They consist of a thick, fibrous, white-glistening or yellowish sac of a roundish shape, and of various sizes, attaining even that of a head. This sac is lined on its inner surface by a half-transparent, gelatinous bladder, which contains a watery, somewhat turbid fluid, in large quantities, and at the same time a number of smaller cysts, of the same structure, which again contain still smaller cysts, and so on to the fourth generation. Besides this, we observe, within these cysts and adhering to some part of their interior surface, groups of whitish granules, which are the *echinococci.* Under the miscroscope they appear with heads which are perfectly similar to that of the tænia solium or the common tape-worm; having four sucking cups, in the middle of each of them a nozzle or snout, which is encircled by a double row of hooks. This echinococcus-cyst has been found in any and every part of the liver, sometimes single, sometimes in great numbers, so that the whole organ appeared to be a conglomeration of such cysts. The parenchyma of the liver, nevertheless, retains its integrity, and only where it is compressed by them, its cells obliterate,

and that part of the liver assumes, according to Rokitansky, sometimes a nutmeg-like appearance. The cysts themselves may undergo different changes. Its fluid content may be converted into a cheesy substance, whereby its inmates perish.

The inner surface of the sac may become inflamed and lead to obliteration of the cyst, or the cyst may burst and pour its contents either into the abdominal cavity, where it almost always causes a fatal peritonitis, or into other organs, with which, by previous inflammation, adhesions had been formed; exactly as in the case of an abscess of the liver. There are cases on record, where echinococcus-cysts, by perforating the diaphragm, emptied their contents into the pleural cavity, from which they were discharged through the bronchial tubes, by means of abscess formations in the lungs. There are cases also where they were discharged through the abdominal walls, or into the intestines, gall-bladder, or a large blood-vessel. Almost always such perforations are followed by a fatal termination; although, in favorable cases, where, for example, the discharge takes place into the intestines, or through the abdominal walls, the cysts are obliterated and a perfect cure has followed.

The echinococcus, when found in the liver, is also frequently found in other organs: the spleen, lungs, kidneys, and the omentum.

Their origin we do not know, although, according to the latest researches, it seems most probable that their germs are introduced into the alimentary canal somehow, and that these echinococci are like the cysticerci or finnen of the pig, a form of the common tape-worm, which only in the intestines attains its full growth. Liebold succeeded in demonstrating this fact by feeding animals with such echinococci, when they became transformed into tape-worms.

Symptoms.

This complaint, of all liver diseases, causes the least disturbance in the system; and the occasional symptoms, caused by its pressure upon this or another organ, are of the least diagnostic value. Only when rupture and perforation take place, we observe, as in the case of liver abscesses, a series of violent symptoms, all which are consequences of inflammation of those organs into which the perforation or rupture takes place.

Our diagnosis is therefore confined to its physical signs alone. These are the following:

1. *A round, smooth, elastic swelling in the region of the liver.*
2. *A sense of fluctuation* on percussing the part in short, abrupt

strokes, whilst the examining fingers of the other hand lie in close neighborhood. What Piorry has called the vibratory sense of hydatids is nothing more nor less than the above-mentioned sense of fluctuation; ascites or ovarian cysts yield it just as clear, under certain conditions even clearer.

Differential Diagnosis.

Liver abscess is attended by fever, pain, and great constitutional disturbances.

Distended gall-bladder is preceded by colicky pains, is usually accompanied by jaundice, and the swelling corresponds to the normal position of the gall-bladder.

Encysted pleuritic exudation does not alter the place of dull percussion sound on deep inspiration; whilst the outline of the dulness on percussion lowers considerably by deep inspiration in hydatids.

2. Diseases of the Biliary Ducts.

Catarrhal Inflammation of the Mucous Lining of the Gall-Ducts.

Pathologically, it is characterized by the same appearance that an inflammation of any other mucous membrane offers: redness and swelling; and, when it becomes chronic, livid or palish color; thickening and blennorrhœic secretion. It is spread over smaller or larger tracts, is usually developed, however, in the ductus choledochus, where it frequently causes constriction of its outlet into the duodenum. This is mostly a secondary process, a continuation of catarrhal inflammation of the stomach and small intestines, and therefore similar in its symptoms to those affections, with the addition of—

1. *Jaundice,* which frequently attains to a high degree, and causes the pulse to sink below sixty beats in a minute; and,
2. *Swelling of the liver,* which is painful to external pressure.

Therapeutic Hints.—Compare Catarrh of the Stomach and Intestines, also Jaundice.

Cholelithiasis, *Formation of Gall-Stones.*

Gall-stones are found mostly in the gall-bladder, now and then in the larger biliary passages, the ductus choledochus, hepaticus and cysticus. Their smaller ramifications contain occasionally only sand. The size of the gall-stones varies much. There have been found some

as large as a hen's egg. These are generally of a roundish or oval shape, especially if found singly; and more angular and serrated, when there are many together. Their color varies from white to black, yellow, brown, green, reddish, bluish; generally, however, they look brownish or blackish or greenish or variegated. Most of them are lighter than water, they swim upon water, and their consistence is not very great; they are easily crushed between the fingers, and, when dry, they crumble to pieces.

They consist of a chalky mixture with pigment mucus and cholestearin around a nucleus of lime and pigment. The cause of their formation is not at all well cleared up yet. Some think it the consequence of a surplus of gall-fat or cholestearin; others lay its origin into a surplus of calcareous substances from drinking limestone water. Without doubt they are caused by mechanical obstacles, which prevent the free exit of gall; and therefore they are found in all such liver complaints as cause obstructions in the biliary passages, like inflammation of the gall-ducts, cancer, and the like. Also sedentary life, disposition to fatness, seems to predispose to it.

Symptoms.

Gall-stones may lie for years in the gall-bladder without causing any symptoms whatsoever. If, however, they become incarcerated in the gall-ducts, then they cause the most violent symptoms, which are known under the name of *gall-stone colic.*

1. It sometimes commences all at once, with an *excruciating pain* in the right hypochondrium and epigastrium, radiating down to the navel; back towards the spine; upwards into the chest; to the shoulder-blades, and in some cases even down the arms to the very fingers' ends. The slightest touch increases the pain.

2. *Vomiting* soon sets in, in bad cases, with small, frequent pulse, cold perspiration, sunken face, sunken eyes, pointed nose, cramps in the extremities, similar to cholera.

3. *Jaundice,* soon after the first attack is over, continuing as long as the stone obstructs the biliary duct; not, however, in such cases where the stone is incarcerated in the ductus cysticus, for the obvious reason that it does not prevent the exit of the secreted bile from the liver into the duodenum.

4. In nervous persons we may observe, in addition, *singultus, delirium, convulsions, syncope, speechlessness.* The duration of such spells is quite different; it may last hours, even days; in the latter case, however, there are intervals of comparative ease. As soon as

the stone gets out of the duct the pain ceases; and we may find the corpus delicti afterwards in the stool.

All cases, however, do not terminate so favorably.

1. *The stones may perforate either the gall-bladder or the biliary duct;* wherever it is encased. This causes peritonitis and usually death. Or, in case of adhesions in consequence of previous inflammation, the stone may find its way, like abscesses and hydatids, into the stomach or the intestines, or through the abdominal walls. Or the stone by obstructing the gall-ducts may cause—

2. *Abscesses within* the liver, with all their consequences, which I have detailed under the head of hepatitis suppurativa; or,

3. The total obstruction of the ductus hepaticus or choledochus may cause the blood to become so overcharged with bile (cholæmia) that under the signs of the most intense icterus, sopor, delirium or convulsions the patient dies; or when the gall-ducts are not perfectly closed or fistulous communications with the intestines have been formed, the patient may linger, with the signs of deep jaundice and obstructed biliary secretion, for a longer time.

The diagnosis is very easy, where gall-stones pass off with the stool, or where we can feel them in the gall-bladder. Icterus is also quite a constant symptom; and those spells of colic are important in helping to distinguish the presence of gall-stones from other complaints.

Therapeutic Hints.

Bellad. seems to be the most important remedy. Where those Cholera symptoms supervene, Ars., Ver. Likewise Nux v., Coloc., Cocculus, Merc., may come under consideration. Rademacher recommends Carduus marianus, and others Alumen, Lyc., Terebinth., and *gall-stones.*

3. Diseases of the Portal Vein.

Pylephlebitis, *Inflammation of the Portal Veins, Coagulum in the Portal Veins.*

In consequence of inflammation the blood coagulates within the trunk of the portal vein, or within its ramifications, over shorter or longer tracts, sometimes throughout. Sometimes it begins in the trunk and spreads into all its ramifications, at other times it commences in the ramifications and extends towards the trunk of the portal veins: the first, traumatic; the latter, caused by pyæmia.

This clot of blood either loses all its fluid constituents and becomes

thick and tough, adhering to the walls of the veins, and obliterating them, in which case it is called adhesive inflammation; or it is converted into pus, and then is called suppurative inflammation. It is caused either by external injuries, or by inflammation of neighboring organs, which spreads, or by compression occasioned by stones in the ductus choledochus, or by tumors. Its most frequent occurrence is, however, in consequence of pyæmia, and it has been observed in new-born children in consequence of inflammation of the navel, spreading through the umbilical veins into the portal veins.

Symptoms.

The adhesive inflammation, if it produces an obliteration of the trunk of the portal vein, causes all the signs of obstructed portal circulation: ascites; enlargement of the spleen; disturbed digestion; vomiting; hemorrhages from the bowels and stomach; hemorrhoides; collateral circulation in form of the caput medusæ, if the umbilical veins be not obliterated, and dilatation of the external abdominal veins. Hence it is most difficult to distinguish this complaint from cirrhosis of the liver, unless we consider the causes of both: pylephlebitis, previous external injury or inflammation of a neighboring organ; cirrhosis, previous abuse of spirituous liquors.

The suppurative inflammation shows all the symptoms of suppurative inflammation of the liver: shaking chills, with or without fever; tenderness; enlargement of the liver; icterus; meteorismus; co-existing enlargement of the spleen; ascites. Hemorrhages from the stomach and bowels are signs which distinguish it from hepatitis.

Therapeutic Hints.—Compare Hepatitis, Icterus.

Inflammation of the navel in new-born children: Calc. c.

Icterus, Jaundice.

I have deferred speaking of this affection until I had finished the description of liver complaints in detail. By this it is at once clear, that jaundice is not a disease in itself, but only a symptom, caused by the most dissimilar morbid conditions of the liver. What I shall have to say about it will be more perspicuous now than if I had commenced explaining it before we had gone through the examination of the different liver complaints.

Jaundice is, as I have said, not a disease, but only a symptom, and consists in a yellow discoloration of the skin by the deposition

of the coloring constituents of bile, namely: biliary pigment, biliphæin, cholepyrrhin. But it is not the skin alone that is invaded by this coloring matter: it has been found also in the hair, nails and enamel of the teeth. The substance of the brain and nerves remains free from it; and on mucous membranes, which abound in blood-vessels, it is seen only after death, or after the natural redness is removed by pressure upon them. The yellow discoloration is first seen on the white of the eyes; then on the wings of the nose, and on the lips; then it spreads over the forehead, and so gradually all over the body.

The so-called *liver-spots* (chloasmata, maculæ hepaticæ) have no relation to diseases of the liver, but are partial deposits of pigment from various causes; and in some cases they are a disease of the skin, pityriasis versicolor, which consists in a fungus-like formation of vegetable parasites. The yellow discoloration of icterus varies greatly in degree, from a slight and light yellow through all shades to a blackish and greenish-brown color.

Now the question: How does this coloring matter come into the blood, to be deposited everywhere? is one which has not yet been fully solved, although men like Liebig, Lehmann, F. C. Schmidt, Strecker, Blondlot, Bernard, Frerichs, and many more, have been at work to solve it.

According to one opinion, *the bile is, in consequence of obstruction in the biliary ducts, reabsorbed again by the blood in the liver and thus carried everywhere.* And this is no doubt the case in different affections of the liver, where, as we have seen, jaundice follows upon such an obstruction and leaves again, when the obstructed passages again become free. But this view does not by any means explain all cases of jaundice. We find icterus in a number of diseases where anatomical examination reveals not the slightest mechanical cause of obstruction in the liver to give rise to a reabsorption of bile into the blood again. Such cases are: pneumonia, pyæmia, puerperal fever, intermittent fever, yellow fever, poisoning by drugs and provings of drugs, the bite of snakes, and chloroform inhalations. In order to comprise such cases under the above head, it has been said that it is caused by a catarrhal inflammation and swelling of the mucous membranes of the gall-ducts; but such is not the case according to Bamberger's numerous observations. It has also been said that it is caused by a spasmodic contraction of those ducts; but such cannot be the case, as the ductus hepaticus has no muscular fibres at all; and the ductus cysticus and choledochus so few of them, that even the

strongest galvanic current cannot contract them sufficiently to become an obstacle to the passage of bile. For this reason it has been the opinion of a number of inquiring minds *that jaundice is not the consequence of reabsorption of bile into the blood; but that it is the result of a dissolution of the blood corpuscles, which contain all the constituents of bile in preformation.*

This view explains even jaundice in inflammation of the portal veins, where the returning blood is entirely prevented by the clogged-up state of that organ from entering the liver; whilst there is no obstacle to the free exit of bile out of the duct; therefore no reasonable ground to be supposed that in this case bile were to be reabsorbed again. No; on the contrary, bile is not secreted in this case; because the venous blood cannot enter the liver, but is carried by a collateral circuit, without touching the liver, (therefore without getting freed of its biliary constituents,) into the vena cava, and thence into the general circulation again, where by some process or other it rids itself of these elements and produces jaundice in all grades of discoloration.

It seems, then, that jaundice may be produced by reabsorption as well as by dissolution. If we review the different diseases of the liver in regard to their being the cause of icterus, we find: 1, *that icterus is invariably present in obstruction of the larger gall-ducts and acute yellow atrophy;* 2, *icterus is always absent in fatty liver and in colloid liver; and, lastly, that icterus may or may not be present, in a slight or high degree,* in all the rest of liver diseases; as, nutmeg-liver, abscesses, granulated liver, echinococcus, cancer, &c.

In addition to the yellow discoloration of the skin, jaundice may present the following symptoms:

1. *Itching of the skin,* (pruritus,) sometimes confined to single localities, (back, chest, extremities,) sometimes all over; in some cases to such a degree that it causes sleepless nights.

2. *Slowness of pulse,* which sinks even to fifty or forty beats in a minute. Acceleration of the pulse only in acute yellow atrophy, in suppurative inflammation of the liver, and in complication with acute diseases.

3. *Yellow sight,* (xanthopia;) every thing white appears yellow to the patient, yet not in all cases.

Hemeralopia, or night-blindness, in cases of granulated liver and obstruction of the gall ducts, proved fatal. Bamberger.

4. *Brain symptoms:* depression, coma, sopor, tremors, paralytical

affection; or headache, dizziness, delirium, excited, wild state, convulsion; or both series in alternation.

5. *Altered urine*—it contains more or less of coloring gall-elements, by which the urine receives a darker hue, from deep yellow to dark brown. If held towards the light, its upper portion shows a light greenish hue, and when agitated, its foam appears yellow. White paper or linen, when dipped in, becomes yellow, and nitric acid causes a green color, which soon changes into violet, blue, red and orange color.

6. *Altered feces of a whitish, grayish color.* But only in cases of obstruction, where the bile is prevented from entering the duodenum. A perfect discoloration of stools is, therefore, a sign of obstruction in the ductus choledochus.

There are a few forms of icterus, which I have to mention especially:

The *icterus neonatorum, or jaundice of new-born children.* It is of frequent occurrence; generally shows itself a few days after birth; lasts a few days. It is met with alike frequently in strong as in weak children. Its most probable cause is, according to Bamberger, an accumulation of mucus within the gall-ducts, which by the smallness of their diameters is perfectly sufficient to cause a temporary obstruction in these ducts, and consequently a short spell of jaundice, until the forward pressing bile clears it away and sets it all right. Of much graver meaning are those cases which develop out of an inflammation of the umbilical vessels, and consequent pyæmia. Such cases belong to that class which is caused by nonsecretion of bile, and consequently by a dissolution of the blood-corpuscles.

Very rare are those cases which are caused by anomalies of the biliary ducts.

Jaundice of new-born children ought not to be confounded with that slight yellowish color of the skin which, in most children, is seen a few days after birth, and is nothing but a change of color of the hæmatin; which, in consequence of the great hyperæmia of the skin in the first moments of life—new-born children look at first almost always very red—becomes deposited in the skin. In such cases there is one important symptom wanting: the yellow color of the white of the eye.

Icterus of pregnant females happens sometimes in the last months of pregnancy, and is mostly of no great importance, unless combined with serious derangements of the liver, which in the individual case must be found out.

Icterus in consequence of violent mental emotions, especially *vexations* and *anger*, seems to be most probably caused by a catarrhal swelling of the mucous membranes within the biliary ducts, as it is almost always accompanied by gastro-duodenal irritation, no appetite, nausea and vomiting, and thus it seems to co-operate with the popular notion that it is hurtful to eat soon after mental excitement, which of course would only increase the trouble.

Therapeutic Hints:

Acon., pain changing about from the stomach to the liver, or to the navel; fever, great thirst; catarrh of small intestines; constipation or diarrhœa, sometimes in alternation; during pregnancy; in new-born children; after fright.

Arsen., in different liver affections; in consequence of intermittent fevers; heat, restlessness, anxiety, irritable mood alternating with low-spiritedness.

Aurum, pain in the liver and upper part of the abdomen; bowels constipated; stool grayish, ashy; urine scanty, green, brownish; lower extremities, from the knees down to the feet, painful and tired.

Bellad., after the abuse of Peruvian bark or mercury; in complication with stones in the gall-bladder; hardness of the liver; congestion to the head.

Berberis, spells of icterus with pale, tough alvine discharges, or profuse acrid, watery diarrhœa; urine dark, turbid, with copious sediment; morbid hunger alternating with loathing of food, or great thirst alternating with aversion to all kinds of drink; constant, troublesome bloatedness of the abdomen, with occasional forcible and noisy discharge of flatus.

Bryonia, stitching pain on pressure in the liver; pressure in the pit of the stomach; pain in the limbs, worse from motion; obstinate constipation; thick, white, coated tongue; nausea; gagging; vomiting after eating and drinking; general malaise; disinclination to move.

Calc. c., stitches in the liver during or after stooping; cannot bear tight clothing around the waist; enlargement of the liver; habitual constipation; grayish, whitish feces; indigestion; pit of the stomach swollen out, like a saucer turned bottom up.

Carduus marianus, in complication with gall-stones; great sensitiveness of the head to cold; loss of memory and smell; colicky pains in the stomach, with water-brash; vomiting.

Carbo veg., psoric taint; scorbutic and intermittent fevers; cachexia; irritable, vehement disposition; loathing of meat, butter,

fat; constipation, or pale, whitish stools; dark red, bloody-looking urine.

Cham., after chagrin, imprudent diet, or taking cold; in new-born children.

Chelid., pain in the liver, which shoots into the back towards the inner corner of the right shoulder-blade; very irregular palpitation of the heart.

China, gastro-duodenal catarrh, particularly after great loss of animal fluids, or after heavy illness; dulness and muddled condition of the head; oppressive, tearing headache, particularly at night; restless, unrefreshing sleep; yellow coating of the tongue; dry lips, loss of appetite; loathing of meat; loathing, and yet canine hunger; bitter or sour eructations and taste; gagging; oppression of the stomach and chest, especially after eating; frequent whitish stools; emission of fetid flatulence without relief; great languor, out of humor, and vehement.

Con., hard swelling of the liver; glandular swellings elsewhere; the flow of urine stops suddenly, but continues again after a while; cough worse after lying down.

Digitalis, constant nausea and gagging, with a clear tongue covered with white slime; soreness and bloatedness of the pit of the stomach; soreness and hardness in the region of the liver; stool delayed, chalky; urine scanty, thick, turbid, blackish; pulse full, slow; chilliness and shuddering alternating with heat; tearfulness, low-spirited.

Gelsem., prostration; clay-colored, creamy stools.

Hepar, especially after mercurial poisoning.

Hydrastis, gastro-duodenal catarrh; sense of sinking and prostration at the epigastrium, with violent and continued palpitation of the heart.

Iodium, dirty, yellowish skin; great emaciation; downcast, irritable mood; yellow, almost dark-brown, color of the face; thick coating of the tongue; much thirst; nausea, white diarrhœic stools alternating with constipation; dark, yellowish-green, corroding urine; after mercurial poisoning; organic lesions of the liver; dyscratic states of the system with hectic fever.

Kali c., swelling of the liver; pain in the right side of the chest through to the shoulder; pressive, sprained pain in the liver; can lie only on the right side; complete exhaustion; neither thirst nor appetite; purulent sediment in the urine; abscess of the liver.

Lach., in different liver complaints; during the climacteric age; after intermittent fevers; pain as if something had lodged in the right

side, with stinging and sensation as if forming into a lump moving towards the stomach; inability to bear any thing tight around the waist, not even the pressure of the night-jacket; pain when coughing as if ulcerated.

Leptandra, full, aching pain in the region of the gall-bladder; hot, aching pain in the liver extending to the spine; with chilliness along the spine; clay-colored diarrhœa.

Lycop., chronic liver complaints; after fright; obstinate constipation; incarcerated flatulence; chronic intestinal catarrh.

Magn. mur., chronic hard swelling of the liver, with pressive pain extending to back and stomach; face dirty, dark-yellow; tongue dirty, yellowish; bowels distended and hard, with pressure and heaviness; stool hard, gray; urine turbid; dyspnœa; palpitation of the heart; œdema of the feet up to the calves of the legs; weak, emaciated; fearful, easily frightened.

Merc., one of the most frequently indicated remedies, with and without fever; duodenal catarrh, thickly coated, flabby tongue; showing the imprints of the teeth; bad smell from the mouth; nausea, loathing; vomiting; soreness in the region of the liver; diarrhœa; gall stones; jaundice of new-born children; after abuse of Peruvian bark.

Myrica cerifera, dragging pain in the back; miserable feeling all over; dull pain in the hepatic region; tongue thickly coated of a dirty white or yellowish color; no appetite, loathing of food, strong desire for acids; sleeplessness, unrefreshing sleep.

Nitr. ac., in consequence of chronic derangements of the liver; costiveness; great tearing pain in the rectum, continuing a long time after stool, even more intense after a loose stool.

Nux vom., gastro-duodenal catarrh; after allopathic dosing; overloaded stomach; use of coffee, liquor, sedentary life; anger. In complication with gall-stones. Headache, dizziness, loss of appetite, bitter taste; nausea, vomiting, gagging; pressure in the stomach, better from belching, soreness of pit, stomach and bowels; unsuccessful urging to stool, constipation. Itching of the skin in the evening; restless sleep; wakes about three or four o'clock in the morning and falls again into a heavy, unrefreshing morning sleep; peevish, irritable.

Phos., in complication with pneumonia or deep-seated brain diseases. Atrophy of the liver; during pregnancy, with dry cough and involuntary discharge of urine.

Podoph., in complication with gall-stone; then the pain extends from the region of the stomach towards the region of the gall-bladder,

and when at its height is mostly attended with excessive nausea; or in complication with inflammatory or hyperæmic states of the liver; then there is a fulness, with pain and soreness, in the right hypochondrium; chronic costiveness or alternate constipation and diarrhœa.

Pulsat., in consequence of chronic susceptibility to hepatitis and derangement of the secretion of bile, with looseness of the bowels; duodenal catarrh; disordered digestion; feverishness and thirstlessness; *after* quinine.

Rheum, in consequence of eating unripe fruit, and accompanied with white diarrhœa.

Sepia, with pain confined to the liver; yellow saddle across the bridge of the nose; brown, yellowish color of the eyelids.

Silic., hardness and swelling of the region of the liver; throbbing, ulcerative pain in the right hypochondrium, increased by contact and walking.

Sulphur, in psoric persons, with or without hardness and swelling of the liver; vomiting of ingesta or blood; pain in the pit of the stomach and right hypochondrium; abdomen bloated; stool constipated; sleeplessness; nightly itching of the skin; hectic fever; red lips.

According to Hartman compare, if icterus be caused by *chagrin, anger:* Acon., Bry., Cham., China, Ign., Nux v., Natr. m., Sulphur.

By *taking cold in consequence of sudden changes of temperature:* Dulc., Nux v., Cham.

By improper food and overloading the stomach: Puls., Ant. cr., Bry., Carbo veg., Cham., Natr. c., Nux v.

By the *abuse of chamomile tea:* Ign., Nux v., Puls., China.

By the *abuse of mercury:* China, Hepar, Sulph., Nitr. ac., Asa fœt., Iod., Ars.

By the *abuse of Peruvian bark:* Puls., Ars., Merc., Ipec.

If being attended *with much flatulence*, according to Bœninghausen: Carbo veg., Cham., Chin., Ignat., Lyc., Nux v., Plumb.

E. Diseases of the Spleen.

Physical examination. When of normal size—which in an adult is as follows: length, four to five inches; breadth, three to four inches; thickness, one to one and a half inches—the spleen yields on percussion a dull sound, bounded as follows: posteriorly by the body of the eleventh dorsal vertebra; in front by a vertical line drawn from the anterior border of the axilla to the free end of the eleventh rib; supe-

riorly by the ninth rib; and inferiorily by the free end of the eleventh rib. In order to obtain a clear result by percussion, the patient ought to be placed upon his right side. It must likewise be considered, whether the stomach be not filled at the time of percussion. In cases of accumulation of fluids in the left thoracic cavity, either pleuritic or pericardial, in accumulation of gas, abdominal or thoracic, in tumors of neighboring organs, the liver, omentum, kidney, it may sometimes be next to impossible to define the size and position of the spleen.

A considerably-enlarged spleen, however, under ordinary circumstances is easily detected by percussion. And it is sometimes enormously enlarged and displaced, reaching inferiorly to the os pubis, and anteriorly to the median line of the abdomen; in some cases even filling almost the whole abdominal cavity.

In such cases it is also accessible to palpation. Even a moderate enlargement may be felt, if it extend below the eleventh rib. Its surface, except when invaded by cancer, is always smooth; and its form oval and sometimes wedge-shaped. Its rounded apex, and the notch which corresponds to the middle line of the spleen, and which becomes the more marked the larger the spleen grows, are characteristic signs by which to distinguish it from any other abdominal tumor. Notwithstanding great and laborious experiments, we know as yet but little concerning the functions of this organ. Only so much seems to be certain, that it bears an important relation to the formation of white blood-corpuscles, although we do not know yet how and in what manner. And this seems to be corroborated by the fact, that diseases of the blood always affect the spleen, altering it in size and consistence and, *vice versa*, that lasting diseases of the spleen lead to a diseased state of the blood, causing anæmia, leukæmia, hydrops, scurvy.

Cases in which such a connection does not seem to exist prove, perhaps, only that the function of the spleen may under certain circumstances be performed by some other organ or organs instead.

Anatomical Peculiarities of the Spleen.

It consists of a much softer and looser texture than any other glandular organ of the body; its areolar framework is made up of the elastic tunic which forms sheaths for the vessels in their ramifications through the organ, which again are loosely connected by small fibrous bands, issuing in all directions from said sheaths. In this way a multitude of interstices is formed, which contain a soft,

granular substance. This peculiarly loose construction makes the organ pre-eminently fit for the reception of large quantities of blood; and the more so as its capsule is also of a lax nature, offering little resistance to extension; so that, on the other hand, if once over-distended, it regains its previous normal state very slowly; and this on account of the inelasticity of its tissue. The veins of the spleen constitute, by their numerous dilatations, the principal part of its bulk; they pour their blood, after uniting with the veins in the stomach, and other less important vessels, into the portal vein.

The whole organ is held loosely in its position by a duplicature of the peritoneum.

The knowledge of these anatomical peculiarities of the spleen at once explains its participation in various abdominal and pectoral affections. All hepatic troubles, and all diseases of the heart and lungs which obstruct the portal circulation, must necessarily retard or prevent the normal egress of blood from the spleen, and cause it to swell; a stagnation of blood in the splenic vein must cause a like stagnation in the veins from the stomach, and thus bring on vomiting of blood, and its loose connection explains at once the possibility of its sinking quite low down into the abdominal cavity under certain circumstances.

The Hemorrhagic Infarct and Splenitis, Lienitis or Inflammation of the Spleen.

The hemorrhagic infarct is of much more frequent occurrence in this organ than in any other. It consists in the blocking-up of the smaller splenic arteries by fibrinous coagula, which have formed in the left ventricle of the heart in consequence of endocarditis, and which have been washed away by the stream of blood, and carried through the splenic arteries into its smaller branches, where they stick fast. This is of such frequent occurrence that it is very rare not to find hemorrhagic infarcts in the spleen, in all cases where post-mortem examination reveals valvular destruction to any considerable degree; much more rarely, such emboli come from gangrenous places of the lungs. In such cases they have to pass through the pulmonary veins, the left ventricle, aorta and splenic artery. Hemorrhagic infarcts form also in consequence of malaria infections, typhus, septicæmia, and acute exanthematic fevers; in these cases, it seems, by a stagnation of circulation within the splenic veins. These hemorrhagic coagula are usually situated at the periphery of the spleen,

and are roundish or wedge-shaped, their broad base being nearest to the periphery, whilst their apices point toward the interior.

They appear at first of darker color and harder than the surrounding tissue, which appears perfectly sound. By-and-by, however, they become discolored and changed into a yellow, firm, homogeneous mass, which during the further progress of the disease may undergo several changes. It may shrink and leave a cicatrix; or suppurate and form abscesses of the spleen; which, if they are many, may transform the whole spleen into a mass of corruption.

These abscesses again may go on to different terminations. They may, by fibrous exudation, become encysted; or they may cause pyæmia; or they may burst and discharge their contents, like abscesses of the liver, into the peritoneal sac; or when adhesions may have been formed with neighboring organs, they may, by perforation, discharge their contents into the stomach, colon, or the pleural cavity.

A primary inflammation of the spleen is a very rare occurrence; even external injuries, a blow, a fall, a wound, are apt to cause a rupture, rather than an inflammation.

Symptoms.—They are frequently quite occult, and of an uncertain character; still a careful consideration of the following conditions may, in most cases, lead us to a right decision.

1. *Enlargement of the spleen*, especially if it be associated with endocarditis, it never reaches more than double its normal size; whilst in many cases it is so insignificant that it cannot be discovered by percussion.

2. *Pain in the region of the spleen.* It originates not in the substance of the spleen itself, but in its enveloping membrane or in the neighboring organs, and is therefore sometimes entirely wanting. When it does exist, it is of a dull character, and is increased by deep inspirations, different motions of the body, and percussion. A sharp pain denotes rather an inflammation of its peritoneal covering. A radiating pain into the left shoulder is likewise sometimes observed.

3. *Fever*, and, when suppuration takes place, *shaking chills.*

4. *Gastric symptoms*, and, in cases of long standing, scurvy, hydrops.

5. *Peritonitis*, in case of rupture or perforation. A number of symptoms, which we find summed up under the head of Splenitis in the works of older writers, do not belong to real splenitis, as described above, but belong to such affections of the spleen as now-a-days are defined as acute and chronic swelling, hypertrophy, hardening or softening of this organ. Such are, anxiety, dyspnœa, cough, nausea,

vomiting, vomiting of blood, darkness before the eyes, dizziness, and so on.

Therapeutic Hints.—Compare such remedies as are pointed out under the heads of those diseases which are either the causes or complications of splenitis, as endocarditis, valvular derangements of the heart, &c.

Acute Tumor, or Hyperæmia of the Spleen.

This consists of a more or less copious accumulation of blood within the gland, by which its volume may become enlarged to five or six times its normal size. The color of its tissue varies from red to brown or violet; and in case of a longer duration it changes to a dirty gray or slate color. There are no other pathological changes present.

This acute swelling of the spleen is an almost constant attendant upon typhus, intermittent, remittent, yellow and puerperal fevers; likewise upon cholera in its stage of reaction; and of a number of other complaints, by which a stagnation in the portal circulation causes stagnation of blood in the spleen. We find it likewise attending anomalies of menstruation. It is therefore always of a secondary nature, and *its symptoms* must vary accordingly. Symptoms, which belong exclusively to it, are—

1. The conspicuous enlargement; which can easily be discovered by percussion and palpation.

2. A rather dull pain in the region of the spleen, which is generally increased by motion, pressure, deep breathing, and lying on the left side.

All other symptoms belong to the primary disease which causes it; for therapeutic hints compare these diseases.

Hyperæmia of the spleen leaves with the primary disease; in some cases, however, it assumes a permanent form; and thus originates—

Chronic Tumor, or Hypertrophy of the Spleen.

The spleen sometimes attains a weight of 10–15–20 lbs.; filling almost the whole abdominal cavity. Its resistance is often like that of a board; and its substance appears dark-brown red, and pale red. In other forms it has as a rule the appearance of waxy or colloid degeneration; and consists indeed of the same homogeneous colloid

mass which the colloid liver presents; and then is called amyloid degeneration of the spleen.

A peculiar variety of this affection is the so-called—

Sago-Spleen.

In this form the whole enlarged organ appears to be infiltrated with half-solid, transparent, round globules, which can be taken out, and very much resemble boiled sago. It seems that the development of this peculiar appearance depends upon the infiltration of the same colloid mass into the vesicles of *Malpighi.*

The chronic tumor resulting from intermittent fevers is of a slate-color.

The *causes* of this chronic enlargement of the spleen, when it is *simple hypertrophy,* are, *all such disorders as cause a stagnation of blood within the venous circulation,* to wit: heart and lung diseases, inflammation and obliteration of the portal veins, and cirrhoses of the liver; but when it consists of an *amyloid degeneration, a number of diseases, which depend upon a morbid state of the blood*—so-called *dyscrasias*—malaria infections, constitutional syphilis, mercurial cachexia, rhachitis, scrofulosis, Bright's disease; in a lesser degree, chlorosis and scurvy, and *leukæmia.*

Symptoms.—Enlargement of the spleen, usually very great, and characterized by its roundish apex and the notch on its inner edge. All other symptoms belong more or less to the primary affection, and are therefore of no diagnostic value for the tumor itself.

Therapeutic Hints must be looked for under the respective heads of causes; however, the following remedies have a special relation to the spleen: Arn., Asa f., Ars., Borax, Brom., Carbo veg., China, Dulc., Ferr., Ignat., Lach., Laur., Merc., Mur. ac., Natr. c., Natr. m., Nux mosch., Plat., Plumb., Ranunc. bulb., Rhus tox., Ruta, Stan., Sulph., Zinc.

Spleen affections and *obstinate diarrhœa:* Anac., Asa f., Bry., China, Dulc., Ign., Puls., Rhus tox., Sulph. ac.

Cancer of the Spleen

Is a very rare disease; is generally of the medullary or encephaloid form, and sometimes attains a pretty large size; it is always connected with cancer in other organs, especially those of the abdomen.

Its diagnosis is easy, when the existence of cancer in other organs has been proved, and when the enlarged spleen shows on palpation that characteristic cancer-unevenness.

Echinococcus-cysts

Are of very rare occurrence; they may exist in the spleen alone, and also in other organs at the same time.

Its diagnosis is difficult, being possible only under those favorable circumstances in which the echinococcus-cyst is accessible to percussion and palpation; when it may be discovered as a roundish fluctuating tumor.

Rupture of the Spleen.

May be caused by external injuries, violent concussions of the body, or by pathological changes of the gland itself, as in its rapid enlargement, especially in typhus, or during the chilly stage in intermittens.

Symptoms.—A sudden very intense pain in the region of the spleen, spreading over the whole abdomen. And in consequence of the internal hemorrhage: paleness, collapsus, cold extremities, small pulse, vanishing of sight and hearing, syncope, distention of the abdomen, death.

Its diagnosis must be founded upon the sudden pain in the region of the spleen, and a knowledge of the previous ailments. A perforation of the stomach or of the intestine always causes tympanites by its air rushing into the peritoneal cavity, and peritonitis. The latter is also caused by ruptures of the liver, gall-ducts, and of the bladder; and besides, the pain which is hereby produced is not in the region of the spleen. A fatal termination usually follows in a short time.

F. Diseases of the Pancreas.

Preliminary observations. The pancreas, a conglomerate gland, analogous to the salivary glands, is situated behind the posterior surface of the stomach, and discharges its secretion by a main duct into the duodenum in the vicinity of the opening of the ductus choledochus into the duodenum. Sometimes the pancreatic and biliary ducts become united just before they enter the duodenum.

Its physiological function has been wrapped up in great mys-

tery, until, by the latest researches of Bernard, Frerichs, Bidder, Schmidt, and many others, the following seems to be agreed upon: That its juice transforms amylum into sugar; and, in conjunction with bile and intestinal secretions, it dissolves the fatty ingredients of food.

Its pathological changes, of which I shall speak particularly hereafter, have been brought to light by Harless, Bicourt, Mondiére, Rockitansky, and Claessen. They are of the rarest occurrence, so that, in hundreds of post-mortem examinations, scarcely one noticeable pathological change of this organ is found; but such changes as have been found and described are acute and chronic inflammation and their sequels: suppuration, hypertrophy, or atrophy, or fatty degeneration, cancer.

In the works of older writers we find a number of symptoms ascribed to diseases of the pancreas, whilst, in fact, they are nothing more nor less than signs of morbid states of the stomach, and, at times, of the liver. There is not one characteristic symptom known by which we might, with any certainty, infer that the pancreas is diseased; so that even Oppolzer with his vast experience comes to the conclusion that a diagnosis of pancreatic diseases is, at this time, impossible. Even its enlargement is discoverable by palpation only in some rare cases, such as the favorable circumstances of an empty stomach and soft pliable abdominal parietes, and even then it may be confounded with swellings of the adjacent glands, or induration of the large curvature of the stomach and the like.

For a similar reason we know but very little about the causes of pancreatic diseases. They are, so far as we do know, always of a secondary nature, caused by diseases of the adjacent organs; and I need scarcely add that to give therapeutic hints in regard to a thing that is not known would be rather a preposterous undertaking.

Pancreatitis, *Inflammation of the Pancreas.*

Pathologically, it is characterized by swelling, redness, and softening of the areolar tissue, which surrounds the lobules of the gland; in a higher degree it alters the whole gland into a firm mass. This state of things results either in resolution or suppuration, or it leads to induration of the areolar tissue and obliteration of the glandular structure.

Hypertrophy of the Pancreas

Is always of a secondary nature, in consequence of inflammation and of infiltration of fatty deposits. Its presence cannot be diagnosticated unless it reaches a palpable size.

Cancer of the Pancreas

Is, perhaps, the most frequently-occurring pathological change of this organ; however, it is almost always found in connection with cancer of other abdominal organs. It causes no characteristic symptoms besides the general cancer-cachexia, and is, therefore, not distinguishable from other coexisting cancerous affection.

G. Diseases of the Kidneys.

The kidneys being the organs for secreting *urine*, any morbid state within them will, no doubt, cause changes in the product of their physiological function; although disease of the kidneys does not attend every abnormal state of the urine. Before we enter upon a consideration of the different renal disturbances, therefore, it will be expedient first to collect those symptoms which we may gain by—

Examination of Urine.

1. Its REACTION. Urine is naturally *acid*, which is easily tested by dipping into it blue litmus paper. This acidity varies much even in normal urine; it is increased before meals, decreased after meals; during digestion it is augmented by sulphuric, nitric, phosphoric, tartaric, and oxalic acids when taken into the system.

An alkaline reaction may take place sometimes during digestion without being a sign of disease; or it results from taking an excess of fixed alkalies, such as the salts of soda and potassa. In this case the red test-paper is colored blue and retains this blue color when exposed to heat. When it exists as a permanent condition it generally indicates nervous depression, resulting from exhaustion by mental anxiety, spermatorrhœa, &c. It is said to be produced temporarily by the juice of lemons and oranges. An alkaline urine may be caused also by a volatile alkaki, such as carbonate of ammonia, in consequence of decomposition. This is generally recognizable by its smell, and the test-paper at once loses the blue color and receives back its original red tint when exposed to a gentle heat. This alkalinity of the urine denotes pathological disturbances, such as the

presence of mucus or pus in the urine in consequence of a disease of the mucous coat of the bladder, or in consequence of paraplegia, whereby the urine is too long retained in the bladder.

2. Its general appearance. *A light, pale color* is usually found in chlorotic and anæmic states of the system, after hysterical paroxysms, then called *urina spastica;* in diabetes mellitus, with much increased quantity and gravity, which may be discovered even by a mere weighing with the hand; in the chronic morbus Brightii; in leukæmia.

A deep, dark color may be caused—

1. *By an increase of urea* in the urine; which appears perfectly clear and transparent when freshly voided, and its foam when agitated is perfectly colorless. As urea is the principal product of the change of nitrogenized substances, it may be taken as an index of the waste and repair of tissues—hence we find it: *a*, after exertions of body and mind; *b*, in acute febrile states, when it gives a sediment after getting cool; *c*, after vicarious secretions of watery fluids, such as profuse perspiration, diarrhœa, &c.; *d*, in consequence of high living, where the quantity of nitrogenized substances taken as aliment cannot all be assimilated.

2. *By an admixture of blood.* In this case the urine is opaque. It is found: *a*, in hemorrhages from the kidneys; *b*, in hemorrhages from the bladder; and *c*, during menstruation or hemorrhages from the womb.

3. *By an admixture of bile.* In this case the freshly voided urine is usually clear and transparent; its foam, when agitated, is intensely yellow; white paper and linen, when dipped into it, become yellow, even olive-green; and a drop of nitric acid, when permitted to fall on a thin layer of such urine, causes at once an interesting play of colors—commencing with green and blue, passing to violet, red, and finally to yellow or brown. It is found: *a*, in icterus; *b*, in the highest state of pyæmia; *c*, in the acute yellow atrophy of the liver; *d*, in some cases of pneumonia, especially on the right side.

Lastly, a dark color of the urine is caused—

4. *By different drugs;* such as santonin, rhubarb, senna, turpentine, dyer's weed, beets, tar, kreosote.

A turbid appearance of the urine, when freshly voided, may be caused—

1. *From an admixture of epithelium*, thrust off by catarrhal processes of the mucous linings within the urinary organs. It is of a

flocculent appearance, and does not alter the specific gravity of the urine.

2. *From gonorrhœal or leucorrhœal discharges,* appearing in the otherwise transparent urine as whitish flakes.

3. *From cylindrical casts* from out of the uriniferous tubuli, during the acute or subacute stages of Bright's disease. They soon settle at the bottom of the vessel, and form a light, downy sediment.

4. *From blood,* as stated above.

5. *From pus,* which settles as an opaque, creamy or clayey mass; reaction, generally alkaline; resolves itself into a dense gelatinous mass, when agitated with an equal quantity of liquor of potassa; and smells foul and ammoniacal in consequence of decomposition. It is a sign of suppuration somewhere in the genito-urinary system, or a proof that an abscess has opened into and is being discharged through this channel. In chronic catarrh of the bladder pus forms a layer of grayish-white sediment.

6. *From earthy salts;* generally, however, only after cooling down. *a. Uric acid* settles in little red granules of a crystalline character, visible to the naked eye; whilst urates constitute more of a pinkish or whitish sediment; the urine appears dark and shows an acid reaction, becomes transparent by the application of heat. If a few drops of nitric acid are mixed with such urine, and the mixture is slowly evaporated nearly to dryness over a lamp, the addition of a drop of ammonia produces instantly a rich purple, (Dr. Prout's Purpurate of Ammonia.) It is found increased in leukæmia, in acute inflammation and fevers, but mostly in acute rheumatism. It is *wanting*, or at least decreased, in the more advanced stages of Bright's disease. *b. Phosphates*—a combination of phosphoric acid with soda, lime and magnesia. Such urine always yields an alkaline reaction, is usually of a light color with whitish sediment, and is cleared up at once by a few drops of acetic acid.

Phosphates are found in excess, and in combination with pus—1. In chronic catarrh of the bladder. 2. In retention of urine in the bladder in consequence of temporary or permanent paralysis; as in low fevers, in hemiplegia, or in paraplegia. In such cases the urine generally has a strong ammoniacal smell.

Phosphates alone are found in excess—1. During convalescence from acute disease; 2. In general nervous debility, resulting from exhaustion by mental anxiety, spermatorrhœa, &c.; 3. In acute inflammatory diseases of the nervous structure during the existence of the most marked febrile symptoms; and—4. In fractures of the skull,

when inflammatory action takes place in the brain; 5. In acute rheumatism; and—6. Temporarily, after eating lemons and oranges, and the abundant use of animal food, and very active exercise.

3. THE URINE BECOMES SEMI-LIQUID, INSPISSATED, VISCID—1. *From an admixture of grape sugar.* This substance makes the urine of greater specific gravity, and is easily detected by mixing a quantity of such urine with caustic potash, and boiling the mixture. By degrees it turns reddish-brown, emits a sweetish odor, like molasses, which becomes still more perceptible when a few drops of nitric acid are added. There are several other tests, to detail which is not in place here; they can be found in Dr. Bœcker's Medical Chemistry, a little work translated and arranged by Dr. Zumbrock, to be had at Bœricke's; also in a number of other works. A large amount of sugar in the urine occurs in diabetes mellitus, of which I shall speak more fully hereafter.

2. *From the presence of albumen.* Such urine, when agitated, foams more than any other urine. The albumen is easily detected—*by heat*, which coagulates it, and by *nitr. ac.*, which causes a white precipitate. Large amounts in the urine constitute what is called *albuminuria*, of which later. This semi-liquid state is likewise in some degree caused by an admixture of blood, pus, bile, of which I have spoken above.

THE SEDIMENTS OF THE URINE may be distinguished in the following manner:

1. *A light, flocculent, cloudy deposit* is commonly *mucus*, entangling epithelial cells or spermatozoës.

2. *A yellow, orange,* or *pinkish deposit*, dissolving by the application of heat—urine acid—is almost always due to *urates.*

3. *A dense, abundant white deposit*, dissolving by the addition of acetic acid—urine alkaline—consists of *phosphates.*

4. *A granular* or *crystalline deposit* of *reddish color* and small in quantity is uric acid.

5. *A dark, sooty and dingy-red deposit* is *blood.*

THE QUANTITY OF URINE changes, even in health, considerably. It is *increased*, however, in diabetes, chronic diuresis, hysteria, drinking of much water. *Decrease:* Fevers of all kinds, deep functional disturbances, profuse excretions other ways, such as sweat or diarrhœa; in consequence of heart diseases, liver diseases, dropsy. Its secretion *ceases altogether* in cholera and typhus.

Diabetes.

This affection consists of an increased proportion of saccharine constituents in the blood; at the same time the blood contains more water and less fibrine than is normal.

The disease is characterized by excessive thirst, and excessive secretion of urine; which contains grape-sugar, (*diabetes mellitus,*) or a substance nearly related to sugar, (*diabetes insipidus.*)

We are yet quite in the dark concerning its origin. Bernard has succeeded in producing diabetes artificially in animals by thrusting a needle into the fourth ventricle of the brain, directly between the nervus vagus and acusticus. Lately it has been observed that sugar appears in the urine after cutting both nervi vagi; likewise in any disease which disturbs the respiratory functions, the introduction of oxygen, and also often etherization.

As this diabetic sugar is normally found in venous, but never in arterial blood, it follows that in healthy conditions this sugar must be changed, or transformed, or annihilated within the lungs, for the venous blood which enters them contains it, whilst the arterial blood which returns from the pulmonary structure contains none. Some have, therefore, attributed the origin of diabetes to the lungs; and, indeed, tuberculosis of these organs is almost a constant complication of this disease. On the other hand, however, it is as possible that the liver fabricates this sugar in such quantities that it would be impossible for the lungs to transform or destroy it all; in which case it would likewise come into the general circulation, and be excreted by the kidneys. Bernard has shown that the liver does fabricate this sugar, and it is his opinion that diabetes has its seat in the liver.

But even if so, we still do not know why the liver produces it in such quantities, nor, in the first case, why the lungs do not destroy it. Its cause may exist in some morbid state of a certain portion of the brain, since the piercing of a certain part of the brain has produced it in animals, according to Bernard.

Symptoms.

Excessive quantity of urine, containing sugar; excessive thirst, especially at night, and great hunger; dry skin; feces small in quantity, and hard; want of natural warmth; constant wasting away of flesh; sexual desire and power entirely gone; mind depressed and peevish; at its height the mouth becomes hot and sore, and superadded phthisis puts an end to the scene.

Therapeutic Hints.—The old school has recommended total abstinence of starchy and saccharine food, and the exclusive use of meat, fish, eggs, &c. This, of course, decreases the amount of sugar in the urine, because it takes away the materials for its formation; but it has not the slightest power to stop the *tendency* to that formation.

According to C. Mueller, the following remedies have produced sugar in the urine of healthy persons: Canth., Chloroform, Curare, Morph., Uran. nitr., and Asclepias vincetoxicum.

Argent. Hahnemann says, some forms of diabetes may be cured by silver, if the other symptoms correspond to the symptoms of this remedy. Rückert mentions a case which he cured by Argent., but which died of phthisis afterwards. He mentions: urine turbid, of a sweetish taste, and profuse; especially at night; scrotum and feet œdematously swollen; anxiety and pressure in the pit of the stomach and want of breath.

Coloc., urine when voided is white and turbid; when getting cold it coagulates and becomes a milk-white, jelly-like mass, which, when poured out, glides, as a compact jelly-cake, out of the vessel.

Nux v., most urine is voided through the night; other Nux symptoms. At first mere Tinct., and later X. Prie.

Phos. ac., urine like milk, mixed with jelly-like, bloody pieces, or clear, like water; pain in the back and region of the kidneys; constant urging to make water; sleeplessness; excessive emaciation; great prostration.

Plumbum, excessive emaciation; suppuration of the lungs; hectic fever; complete impotence; obstinate constipation; great hunger; sweetish taste in the mouth; sweetish belching and vomiting.

Besides, the following are recommended: Ars., Bovista, Cuprum, Eupat. purp., Digit., Helonias dioica, Kreos., Lach., Lycopus virg., Magnesia usta, Sulphur, Trillium.

Hæmaturia, *Passing Blood with the Urine.*

The blood comes either from the kidneys, ureters, bladder or the urethra. According to its quantity, it colors the urine more or less, and forms a more or less thick sediment in it.

It may arise from quite different causes—injuries, inflammation, typhoid and exanthematic fevers, Bright's disease, irritating drugs, calculi, ulcers, cancers. In yellow fever, plague and scurvy, it seems

to be dependent upon a general dissolution of the blood. Sometimes it is vicarious bleeding.

In *renal hemorrhage* the blood is thoroughly mixed with the urine, and it is preceded or accompanied by such symptoms as denote a disease of the kidneys, especially pain in the region of the kidneys, dysuria, albuminuria.

In hemorrhage from the ureters we generally have symptoms of colicky spells, as it usually originates in consequence of incarcerated calculi within these tubes.

In vesical hæmaturia the blood is not so thoroughly mixed with the urine, and is discharged with the last of the urine. At the same time we have the symptoms of the diseased bladder, as, pain in the region of the bladder; strangury; discharge of mucus and pus; paralytic states of the bladder.

In hemorrhage from the urethra the blood oozes out of it without passing water, and is generally caused by external violence.

Hæmaturia is rarely attended with the known signs of a profuse loss of blood. Only in debilitated persons it may cause anæmia, and attendant symptoms.

Those cases of hæmaturia, in consequence of a dissolution of the blood, are of course the worst.

Therapeutic Hints.

Arn., when caused by external violence.

Arsen., hemorrhoids of the bladder; very painful micturition; scanty secretion; burning pain in the urinary organs; paralytic symptoms of the bladder; great anguish and restlessness.

Calc. c., in chronic cases; hemorrhoidal affections; polypous affections; leucophlegmatic persons.

Camph., after irritating drugs, especially cantharides, and exanthematic fevers.

Canth., violent cutting, pressing and crampy pains in the bladder, extending into the urethra and into the kidneys; strangury, burning pain before, during, and after micturition; cylindrical exudations in the urine; pain increased from drinking water; even from the sight of water.

Chimaphila, in consequence of severe and long-continued gonorrhœal inflammation.

Erigeron, empirically used, without any characteristic indications.

Hamamelis, ditto.

Ipec., profuse bleeding, with fainting, deadly paleness, sickness of the stomach; oppression of the chest.

Lycop., especially in connection with gravel or chronic catarrh.

Merc., painless discharge of blood; also very violent urging to urinate, and painful micturition, whereby sweat easily breaks out.

Mezer., crampy pain in the bladder; and, after that, bloody urine is voided.

Millef., pain in the region of the kidneys, with chilliness, necessity to lie down; the blood forms a sediment in the vessel like a bloody cake; pressive pain in the urethra during the flow of blood.

Nitr. ac., according to Goullon, specific in active hemorrhage; also after mercury; urging *after* micturition, with shuddering along the spine *during* micturition; gonorrhœal affections.

Nux v., after the abuse of alcoholic stimulants, allopathic drugs, suppression of hemorrhoidal and menstrual discharges; full, tensive feeling, pressure, and distention in the abdomen, loins, and region of the kidneys; signs of stagnation in the portal circulation.

Puls., drawing, cutting pain around the navel into the small of the back; penis and scrotum drawn up; crampy pain in the right leg from the knee to the groin.

Phos., when it depends upon a general dissolution of the blood; after sexual excesses.

Secale, passive hemorrhage; blood thin; blood corpuscles wanting in consequence of dissolution; or painless discharge of thick black blood in consequence of kidney disease; coldness of the body; cold perspiration on forehead; great weakness.

Sulphur, after suppressed cutaneous eruptions and hemorrhoidal discharges; stinging and burning in the urethra.

Terebinthina, the blood is thoroughly mixed with the urine, forming a dirty reddish-brown or blackish fluid, or a coffee-ground-like sediment; burning, drawing pains in the kidneys; pressure in the bladder, extending up into the kidneys when sitting, disappearing when walking about; before urination, pressing and straining in the bladder when sitting, going off when walking; burning in the bladder, worst during micturition; in complication with scorbutic affections, and if caused by living in damp, moist dwellings.

Uva ursi, constant urging to make water and straining, with discharge of blood and slime; or constant straining without any discharge at all, or only a few drops of urine, after this cutting and burning in the urethra, which is succeeded by a discharge of blood; hard stools.

Zincum, vicarious bleeding through the urethra in consequence of suppressed menstruation, with pain in the bowels, diarrhœa, and night-cough with expectoration of mucus

Compare also the corresponding diseases, of which Hæmaturia may be the consequence.

Acute Bright's Disease, or Croupous Nephritis.

Its pathological character. The diseased kidneys are enlarged, sometimes even double their normal size; their surface is smooth; their texture unchanged. The papillæ are hyperæmic; the uriniferous tubuli, especially those of the cortical substance, are filled with coagulated, cylindrical fibrin, which are discharged with the urine, (where they may be recognized, by their cylindical form, by means of the microscope,) in connection with epithelial cells and blood-corpuscles. Thus in its nature it is nearly allied with croupous inflammation of the larynx and lungs.

Primarily this affection is generally caused by exposure to cold or external injuries or irritating drugs, such as cantharides, balsam of copaiva, turpentine, &c.

Secondarily it is frequently found in connection with scarlet fever; less frequently with measles, typhus, intermittent fevers, and the typhoid stage of cholera.

Symptoms.

1. *Commencing with a chill,* it is followed by fever, nausea, vomiting, pain in the region of the kidneys, extending along the course of the ureters.

2. *Constant desire to urinate,* but only little urine of a dark, dirty-reddish, even brownish color is yielded, which forms a flocculent, yellowish or reddish sediment, and contains the above-named cylindrical casts, in connection with epithelial cells and blood-corpuscles. Boiled with addition of nitric acid, it yields large quantities of albumen.

3. *Œdema* of the eyelids, face, extremities and genitals. The skin on the œdematous parts is tense, sometimes glistening, showing the mark of pressure only a short time.

4. Not unfrequently we find it complicated with exudations into the pleural and peritoneal cavities in consequence of pleuritis and peritonitis.

5. In its highest degree the œdematous swelling extends into the lungs and glottis, causing distressing difficulty of breathing; and even into the brain, causing sopor and convulsions.

Its progress is not very rapid; after eight to fourteen days the febrile motions cease; but albuminuria and dropsical symptoms still continue, which, in favorable cases, diminish after two or three weeks.

Therapeutic Hints.—In complication with scarlet fever compare: Apis, Ars., Asclep. syriaca, Bell., Bryon., Colch., Helleb., Kali c., Lach., Lyc., Merc., Rhus t., Sec., Seneg., under the head of Scarlet Fever.

After the abuse of cantharides, balsam of copaiva or turpentine, the best antidote is Camphora.

Acon., high fever; restlessness; dark scanty urine; consequence of exposure to cold.

Cantharis, high fever; pulse frequent and hard; drawing, tearing pain in loins and testes, worse from motion; sometimes in spells, stopping breathing; micturition exceedingly painful, drop by drop; scanty, dark urine, with burning in the bladder and urethra; the urine contains cylindrical casts of fibrinous exudation, epithelial cells and blood, and is therefore easily coagulable; constipation; uræmic, cerebral symptoms, like stupor, numbness; after exposure to cold, or mechanical injuries; complication with prostatic derangements, inflammation of the bladder, and stricture of the urethra.

Balsam of copaiva and cubebs have been observed to cause inflammation of the kidneys, though their sphere of action is not known yet.

Hepar is recommended by Kafka on the ground of its having a decided relationship to croupous exudations.

Kali c., tensive pain in the region of the left side; swelling of the inguinal glands; œdema of the left foot, extending gradually to the right foot and upwards over the whole body; blackish urine, which, on shaking, foams, and on standing leaves a thick, reddish, slimy sediment; frequent, soft, palish evacuations from the bowels; after a blow upon the left side and staying for hours in wet clothes.

Kali hydroj., scanty, dark urine; painful micturition; sediment dirty, yellowish; great thirst; heat in the head. Likewise recommended by Kafka on the same ground as Hepar.

Phos., the skin is pale and anæmic; frequent watery diarrhœa; in complication with pneumonia, bronchial catarrh, ulceration of the bones, amaurosis.

Rhus tox., tearing pain in the region of the kidneys; œdematous swelling all over; after exposure to wet.

Terebinthina, scanty secretion of dark, (occasionally,) bloody urine,

which coagulates on addition of nitric acid under the application of heat; œdema all over; intestinal catarrh and diarrhœa; bronchial catarrh, with expectoration of much mucus.

Parenchymatous Nephritis, Albuminuria, *Chronic Bright's Disease.*

In accordance with its pathological character it has been divided into three stages:

1. *Hyperæmia and exudation;* the kidneys appear enlarged; the uriniferous tubuli of the cortical substance contain a fibrous exudate; the epithelial cells are not much changed; corresponding thus with croupous nephritis.

2. *Transformation of the exuded matter into a fatty mass.* The kidneys enlarge still more, because the uriniferous tubuli become distended by epithelial cells which swell, and the cylindrical casts of fibrin which collect therein, all of which undergo a gradual fatty degeneration.

3. *Atrophy,* in consequence of the discharge of the destroyed epithelial cells, and of the exuded and transformed cylindrical casts and fatty matter, and the final obliteration of the uriniferous tubuli.

The following are recognized as principal causes of this disease: 1. *Exposure to cold and wet;* it is therefore found much more frequently on coasts in cold climates than in warmer and dryer countries. 2. *The abuse of acrid diuretics,* as cantharides, balsam of cubebs, turpentine, &c. 3. *Alcoholic drinks;* it seems to be caused by their abuse as frequently as cirrhosis of the liver. 4. *Long-standing suppurations, caries and necrosis of the bones;* in fact, all sorts of cachectic states of the system. And 5. *Different dyscrasias:* gout, rhachitis, scrofulosis, syphilis, and malaria-cachexia.

Symptoms.

1. *Pain in the renal regions;* but there are exceptions to this.

2. *The patient feels weak; the skin and mucous membranes grow pale, anæmic,* without an apparent cause. This should draw the physician's attention to the—

3. *Urine.* It may not be much out of the way as to its quantity, though generally it is diminished in its first stages, and in the latter increased; but it has changed much in regard to its quality, always containing more or less *albumen.* It is commonly of a pale, yellow color; foams easily when agitated; and retains its foam for a longer

time than any other urine; by adding a few drops of nitr. ac., it coagulates on being heated.

4. *Hydrops.* This, like the albuminous urine, is one of the most characteristic signs. The œdema generally commences first in the eyelids and face, or on the feet; later, on the upper extremities, the abdominal parietes, and the scrotum. It frequently changes location: so that whilst in the evening the feet are the parts mostly swollen, we find in the morning the swelling greater on the back, arms, hands and face. Ascites, hydrothorax or hydropericardium set in at a much later period, if at all.

Frequent complications of this disease are: pleuritis, pericarditis, peritonitis, and meningitis; also, catarrhal affections of the bronchial tubes and of the intestines; hypertrophy, and valvular derangements of the heart.

There are yet to be mentioned as symptoms which have been observed in some cases: *vomiting, sopor,* and *convulsions*—consequences either of a general poisoning of the blood; uræmia, where the secretion of urine ceases altogether; or of œdema of the brain, and consequent capillary anæmia of this organ, when the secretion of urine is rather increased than decreased. Such conditions have been seen to be followed by a *decrease, or even entire loss of sight,* which, according to the latest observations, has its causes in a degeneration of the retina, or in an extravasation of blood within this organ. The duration of the disease may be from several months to as many years, depending upon its causes and complications.

Therapeutic Hints.—Compare, according to its different causes, as follows:

When in consequence of exposure to cold and wet: Calc. c., Dulc., Kali c., Merc., Nux v., Rhus t., Sepia.

When in consequence of acrid drugs: Camph., Nux v.

When in consequence of alcoholic drinks: Arsen., Bry., Carb. veg., Lach., Nux v., Puls., Sulph. Milk diet.

When, in consequence of suppuration, cachectic states of the system: Asa, Aurum, Calc. phos., China, Ferr., Hepar., Mezer., Phos., Silic., Sulph.

When in consequence of a dyscrasia, the different chapters appertaining thereto must be consulted.

Amongst the new remedies are named: Cauloph., Chimaph., Eupator. pur., Helon., Phytolacca.

Compare likewise the remedies mentioned under the head of Acute Bright's Disease.

Nephritis vera, suppurativa, *or Interstitial Inflammation of the Kidneys.*

The above-described inflammations have their seat in the uriniferous tubuli; nephritis vera attacks the interstitial tissue, which conjoins the uriniferous tubuli and the capsules of Malpighi.

The kidney appears enlarged, soft and dark red; its capsule injected, thickened and easily separated. On cutting through the substance, its structure appears indistinct and yields on pressure a thick bloody fluid. In the further progress of the disease the parenchyma assumes, in consequence of exudation, a dirty brown and grayish color; and lastly it suppurates, giving rise to abscesses in different places, which may severally become encased or unite: if the collection of pus be too great it may be discharged, either into the renal pelvis, or, like abscesses of liver and spleen, into the abdominal cavity, or in consequence of previous adhesions even into the thoracic cavity, intestines or externally. It is caused by external injuries; renal calculi; gravel; pieces of bone in consequence of caries of the spine; inflammatory processes in neighboring tissues; exposure to cold and wet; or, especially, by infection of the blood by ichor.

Symptoms.—1. *Chill followed by fever* is the commencement. 2. Pain in the affected kidney; as generally only one kidney is affected. This pain is aggravated by pressure, motion, coughing, sneezing, deep inhalation; it extends along the ureter into the bladder, and to the thigh, and upward into the shoulder of the affected side. 3. Constant painful urging to void urine, which passes off in very small quantities only; is dark, thick and usually mixed with blood. In high degrees of inflammation, or if both kidneys are affected, there may ensue a complete suppression of urine, in which case soon follow: 4, Delirium, sopor, convulsions; 5, Nausea and vomiting are always present; 6, A reoccurrence of chills at the height of the disease denotes commencing suppuration.

In such cases the disease takes a slow chronic form, and ends like liver and spleen abscesses, either in encasement and absorption of the matter, or in rupture and perforation with its various consecutive symptoms.

The prognosis depends entirely upon these different conditions.

Therapeutic Hints.

In the inflammatory stage, Acon., Bell., Camphor, Canth., Con., Hep., Magn., Merc., Nitr. ac., Puls., Scilla, Sulphur.

If delirium and sopor be present, Hyosc.
In the suppurating stage, Canth., Lyc., Merc. corr., Puls.
Abscesses, Ars., Canth., China, Hepar, Lyc., Merc., Puls., Silic.
Compare also Acute Bright's Disease.

Nephralgia, Colica Renalis,

Is in most cases caused by the passage of calculi through the ureter into the bladder, whence they are usually discharged through the urethra. These urinary concretions form in the calices of the pelvis of the kidneys, and vary much in size and form. It is a singular fact that sometimes comparatively large stones pass through the ureters without giving any pain; whilst at other times much smaller concretions, although they are not rougher than the larger ones, cause *a most excruciating pain* along the ureter into the bladder, and in males into the testicle, which is generally drawn up, of the affected side. This locality, direction, and violence of the pain, distinguishes such attacks from all other painful affections of the abdomen.

It is generally attended *with vomiting, cold perspiration, cold extremities, small pulse, great agony and collapsed features.* It ceases quickly as soon as the calculus enters the bladder. Only in rare, quite bad cases, the calculus stays incarcerated, plugging up the ureter and causing a bursting of it, or uræmia.

These same spells may be brought on by blood-coagulæ, or parasites, which enter the ureter.

As the pain does not seem to depend upon the size or shape of the concretion which is passed, it must depend upon a greater sensitiveness or irritability of those tender tubes at the time they suffer the insult. For this reason I deem it a very crude assertion, which we find promulgated, even in homœopathic literature, that renal colic would scarcely be reached by medicine; as the concretion had to make its way at all events, and could not be hastened in its progress by any means. If that were so, why do even large concretions pass without any pain? Why do some require only several hours and others again three or four days in reaching the bladder? This shows beyond any doubt that the calculi encounter now more, now less obstruction on their road, which consists in a greater or less spasmodic contraction of the ureter, dependent upon a greater or less irritability of these tubes. And just this very morbid state of the ureters is amenable to medicine.

Therapeutic Hints.

Bellad., spasmodic, crampy straining along the ureter, through which the calculus makes its way.

Lyc., after Nux v.; colicky pain in the right side of the abdomen; extending into the bladder; with frequent urging to urinate. Urine incrusting the vessel with red sand.

Nux v., always the best remedy after the palliative use of so-called anodynes; pain, especially in the right kidney, extending into the genitals and right leg; nausea; vomiting; constant urging to urinate; insufficient urging to stool; inability to lie on the right side; better while lying on the back; rising and walking about increases the pain.

Opium, or morphine is given by the old school in large doses, to *lull* the pain; it is indicated where there are pressive, squeezing pains, as though something had to force its way through a narrow space; shooting pains from different places into the bladder and testicles; vomiting of slime and bile; obstinate constipation; dysuria; greatest anxiety and restlessness; constant changing position; face hot; pulse slow.

Tabacum, constant deadly sickness of the stomach and retching, with cold perspiration; usual violent colicky pains in the region of the ureter; right or left side.

The following may also be mentioned: Calc. urinaria, Cann., Erigeron, Eupat. perf., Galium, Sassaf., Silic., Zinc.

Pyelitis, *Catarrhal Inflammation of the Renal Pelvis.*

Its mucous membrane appears reddened and swollen, sometimes ecchymosed, and incrusted with urinary concretions. It secretes purulent matter, and in most cases spreads through the ureters into the bladder. The inflammation of the ureters causes often strictures of these ducts, and, in consequence, distentions above the constricted parts. Its most frequent cause is calculi within the renal pelvis; not unfrequently it is an extension of gonorrhœal inflammation from the bladder through the ureters.

Symptoms.

It commences often with a shaking chill, which is followed by fever. There is pain in the region of the kidneys, and constant desire to urinate. The urine is bloody, and yields, on standing, a *purulent sediment*, which sometimes is mixed with sand.

In *chronic* cases, we observe an alternate increase and decrease in

the intensity of the fever, and always a heavy sediment of pus in the urine. When only one side is affected, the other secretes normal urine; when both, it soon wears the patient out.

In cases of rupture in consequence of strictures, ensuing peritonitis soon brings the scene to an end.

Therapeutic Hints.

Purulent sediment, Canth., Merc. corr., Nux v., Petr., Phos., Puls., Sepia, Sulph.

Gravel in the urine, Lyc., Sars. Compare the preceding chapter.

Perinephritis, *Inflammation of the Renal Capsule.*

The capsule appears injected and infiltrated with exudation, or covered with purulent secretion; in consequence of which, adhesions are formed with neighboring organs. This state of things may lead to a thickening of the capsule, and to abscesses.

Primarily, it is caused by external injuries, and exposure to cold.

Secondarily, it may be a continuation of an inflammatory process in its vicinity, or of pyæmia.

Symptoms.

They resemble very much all other inflammatory affections of these organs.

1. Chill, followed by fever.
2. Acute pain in the region of the kidney or kidneys.
3. Constant desire to urinate, with but little discharge; urine highly colored and hot; but it contains neither blood, thus differing from nephritis, nor does it form a purulent sediment, thus differing from pyelitis.
4. Vomiting.
5. If in consequence of this inflammation an abscess is formed, it may discharge into the peritoneal cavity; or, in consequence of adhesion, the pus may gradually burrow downwards in different directions between the different fascias; or may work towards the surface and discharge exteriorly. In this case we observe a gradual swelling in the region of the kidneys, which fluctuates, points, and bursts.

Therapeutic Hints.—Compare Nephritis.

H. Diseases of the Bladder.

Cystitis, *Inflammation of the Bladder.*

As the bladder consists of a muscular coat, which is lined inside by a mucous membrane, and, exteriorly, is nearly covered by the peritoneum, it is clear that inflammation of the bladder may have its seat either in the mucous membrane, or in the serous covering, or pervade the whole structure. Where it attacks the mucous lining it is called *cystitis catarrhalis* or *mucosa*, or *catarrh of the bladder*. This characterizes itself pathologically, like all other catarrhal inflammations, by redness, swelling and mucous secretion; and when becoming chronic, by a livid appearance of the membrane, with slate-colored spots. The mucous membrane becoming more or less disorganized, is found either softened, thickened, or infiltrated, and covered with a thick, grayish, purulent secretion. The inflammatory process spreads not unfrequently to the muscular coat, and makes it hypertrophied. Its *causes* are, exposure to cold and wet; external injuries; irritating drugs, (cantharides, copaiva balsam, &c.;) irritating calculi; retention of urine; extension of inflammatory processes in neighboring organs, (diseases of the prostata;) strictures and inflammation of the urethra, &c.

Symptoms.

1. *Pain in the region of the bladder*, which is worse from external pressure and motion; frequently this pain extends along the ureters into the kidneys, and downwards through the urethra.

2. *Frequent painful micturition.* The urine is voided drop by drop, under great straining, and a feeling as though scalding fluid were passing. It is highly colored, hot, and occasionally mixed with blood and mucus.

3. At its height it causes *high fever, vomiting, prostration, cold perspiration, singultus, &c.*

4. In the chronic form it is not so painful, but always attended with frequent desire to urinate, and the passing of turbid urine; which, after standing, always yields a heavy, thick, glairy, viscid sediment of mucus, which, if poured from one vessel into another, draws strings. It smells more or less ammoniacal, and has an alkaline reaction.

5. The chronic form sometimes leads to hypertrophy or dilatation of the bladder; in which case the patient cannot entirely empty the bladder. In some cases there is a paralysis of the sphincter, and the urine flows off involuntarily.

6. The chronic form is frequently subject to acute exacerbation from any irritating cause; and is generally found in advanced age.

Therapeutic Hints.

High fever; restlessness; constant urging, yet fearful of voiding the urine on account of the painfulness of the act, **Acon., Bellad.**

Violent burning in bladder, **Acon., Ars.**

Burning and pressure in bladder, **Nux v.**

Violent tenesmus and burning, **Canth.**

Bladder largely distended, **Ars.**

Congestion of the head; tongue red and dry, **Acon.**

If attended with vomiting, and cold perspiration, and anxiety, **Ars.**

Vomiting and nausea, **Canth.**; great thirst, **Ars., Canth.**

Frequent small pulse, **Canth.**

After a fall, blow, &c., **Arn.**

After taking cold, **Merc., Puls.**

After irritating drugs, **Camphora.**

In chronic cases, Calc. c., Carbo v., Coloc., Dulc., Lyc., Phos., Petr., Sulph., Sars., Uva ursi.

Acon., in all acute catarrhs, characterized by high fever; restlessness; and brought on by exposure to cold, dry winds. The urine is scalding hot; dark red or turbid; micturition painful, difficult, sometimes only drop by drop; children reach with their hands to the genitals and cry out.

Ars., burning pain, especially at the commencement of urinating; fever; great restlessness; cold perspiration; face and extremities cold; or in chronic cases with inability to void the water; bladder greatly distended and paralyzed; urine turbid, mixed with pus and blood.

Bellad., if not better some twelve hours after Acon.; rapid sinking of strength; the region of the bladder is very sensitive to the touch; the urine hot and fiery-red; clear at first, but soon becoming turbid on standing, and depositing a copious, slimy, bright-red bran-like sediment.

Camphora, if caused by cantharides, balsam of copaiva, turpentine, &c.

Cann., if not better after Cantharides within about twelve hours; gonorrhœal inflammation.

Canth., spasmodic pain in the perinæum along the urethra down into the testes, which are drawn up; intolerable burning pain in the

bladder; cramping pain in the thighs; cutting through the abdomen; burning pain in the glans penis, the orifice of which is reddened; micturition difficult, only drop by drop, with a feeling as though melted lead were passing through the urethra, with violent straining, which increases the pain; urine at first clear, but afterwards turbid, bloody, scanty, or only blood; painful erections of the penis; great restlessness and fever; thirst, but drinking or even the sight of water increases the pain.

Carbo veg., in old people and chronic cases where the acute inflammation has subsided and only blennorrhœa exists.

Caust., when in consequence of long retention of urine the muscular coat becomes paralyzed; compare Helleb., Hyosc., Ars.

Chimaphila, urging to urinate after micturition; the urine is high-colored, depositing a copious, mucous sediment; constipation.

Coloc., after alleviation of the most violent symptoms, when the pain during micturition extends all over the abdomen, and the urine looks turbid when first voided, depositing, on standing, a tough, mucous sediment, which can be drawn into strings.

Dulcam., in chronic cases with constant desire to urinate deep in the abdomen; urine is limpid when voided, but assumes an oily consistence on cooling, and contains a tough, jelly-like, whitish, or reddish mucus, intermixed with little lumps of blood; it smells foul. All symptoms grow worse when the weather changes from warm to cold.

Helleb., the inflammatory process increases slowly to the greatest violence, with constant desire to urinate, causing spasms; little urine is voided; constant nausea; distended abdomen.

Hyosc., retention of urine, so that the bladder becomes largely distended; urine turbid, depositing a mucous or purulent sediment; great thirst; dry tongue; delirium; subsultus tendinum.

Lach., discharge of bad-looking mucus during micturition; dull pain in the bladder; sensation as if a ball were rolling in the bladder.

Lycop., dull, pressing pain in the region of the bladder and abdomen; the urine is turbid, milky, depositing a thick, purulent sediment of a most nauseating smell; chronic cases; disposition to urinary concretions.

Merc., fever with chilliness; great soreness in the region of the bladder when touching it; violent urging; the urine flows in a thin stream, or only drop by drop; contains mucus, blood, even pus; during micturition sweat breaks forth; gonorrhœal inflammation.

Nux vom., painful, ineffectual desire to urinate, or discharge of urine drop by drop, with burning and tearing; pale urine followed by thick, whitish, purulent matter, with violent, burning pain; spasmodic retention of urine; constipation, with ineffectual urging; after drugs or suppressed gonorrhœa.

Pareira brava, constant urging to urinate, with violent pain in the glans penis and straining; the pain is so great that it extorts loud screams from the patient; always worse after midnight till morning; the urine has a strong ammoniacal smell, and contains large quantities of thick, tough mucus.

Phos. ac., when the urine looks like milk, and becomes quickly decomposed.

Pulsat., after exposure to cold, the urine deposits a slimy sediment, which sticks to the vessel; tenesmus and stinging in the neck of the bladder; the pain continuing a while after micturition.

Sepia, in chronic cases; distention of the lower portion of the abdomen; annoying, itching sensation in the region of the bladder, with urging to urinate, especially in the night; during and after micturition chilliness and heat in the head; the discharge of mucus does not take place at each evacuation of urine, but comes on periodically; sometimes pieces of coagulated mucus clog up the urethra; admixture of a kind of dark brown pigment; constipation.

Sulphur, constant desire to urinate, day and night; the urine drops slowly out of the urethra; it deposits thick, tough mucus, which sticks to the bottom of the vessel; purulent sediment; after micturition, the pain continues in the urethra until a new urging ensues; stools likewise painful; feverish and sleepless through the night; cutaneous eruptions here and there on the body; suppressed itch; gonorrhœal discharges; hemorrhoidal disposition.

Uva ursi, frequent urging with little discharge, and a burning, cutting pain afterwards; the urine is yellow, but deposits a tough mucus; sometimes blood and mucus are voided at the same time, with great straining; constipation.

A number of other remedies may present themselves for consideration: Calc. c., Capsic., Con., Erigeron, Graph., Hepar, Hydrastis, Nitr. ac., Phos., Sarsap., Senega.

Compare also those remedies mentioned under the head of Kidney Diseases.

When the inflammatory process attacks the serous coating of the bladder, which is a part of the peritoneum, it is called—

Cystitis Serosa,

And is nothing more nor less than a partial peritonitis, of which we have already spoken.

When, however, it attacks all the coatings, the whole structure of the bladder, then it is called—

Cystitis Parenchymatosa.

This is no doubt the most serious form of all. Pathologically, its walls are thickened, its cavity decreased, its contractility and expansibility lessened, and its submucous and subserous areolar tissue infiltrated, forming abscesses of the bladder.

It is no primary affection, but an extension either from catarrhal or peritoneal inflammation, and it is likewise found in consequence of exanthematic fevers, typhus, puerperal fever, pyæmia, &c.

It seldom attacks the whole bladder, but generally its anterior wall.

Its symptoms are, on the whole, the same as above detailed; and its diagnosis is indeed very difficult.

When abscesses form, they may discharge either in the bladder—the most favorable event—or into the peritoneal cavity, causing general peritonitis; or the pus may gradually work its way downwards, and discharge through the perinæum, or into the vagina or the rectum.

Therapeutic Hints the same as above.

Pericystitis

Is an inflammation of the loose areolar tissue which surrounds the bladder, and is entirely analogous to perityphlitis and periproctitis, of which I have been speaking before.

There are no other characteristic symptoms than those of inflammation of the bladder, with which it is always more or less connected.

Calculi Vesicæ, *Stones in the Bladder.*

Calculi vary from the size of gravel to conglomerations of the size of a man's fist, and even larger. In shape they are either round, or flat, or rough, irregularly shaped.

In regard to their chemical composition, they consist *of clear uric acid*, or a combination of uric acid and ammonia, soda, magnesia or

lime. They are hard, heavy, brown, yellow, or grayish-white, and are mostly smooth, roundish, rarely irregular in shape.

Next in frequency are those which consist *of phosphates.* They are not so compact, but are brittle, crumbly and light; of a whitish, grayish, seldom yellowish color; and are of a roundish shape, with a smooth but sandy surface.

Still rarer are those which consist *of oxalate of lime.* They are the hardest and heaviest of all; have a dark brown or blackish appearance; and an uneven, wart-like surface.

Such conglomerates which consist *of carbonate of lime, cystine, xanthoxyde* are of very rare occurrence, whilst *mixtures of urates, phosphates and oxalates* are quite frequently found. In such mixtures there is usually a nucleus of oxalate of lime, around which other earthy salts are deposited.

Such urinary concretions may be very numerous. Liston extracted five hundred from one bladder. These are usually renal calculi, which are formed in the renal pelvis, and which work their way gradually through the ureters into the bladder, where they remain and increase in size. Stones which are formed primarily in the bladder are generally solitary. They are either movable in the bladder, or they are entangled between the folds of its mucous membrane, or they have formed by their weight an extension of the bladder, where they are held stationary.

Those which roll about freely in the bladder are always of a roundish shape and smooth, whilst those which are stationary assume an uneven and jagged surface. Very large stones nearly fill the cavity of the bladder; they have been found to weigh from five to six pounds.

Gravel passes away without much difficulty. Neither do smooth and movable stones, if not too large, cause much inconvenience. But when they are of larger size, and of a rough and irregular shape, they cause considerable trouble.

Symptoms.

1. *In rare cases the patient feels a heavy body in the bladder moving about, when changing position.*

2. *Pain in the neck of the bladder* when walking, standing, sitting or during stool; still worse when riding in a carriage or on horseback, but much less during rest, and especially while lying on the back or on the face. This symptom becomes quite characteristic when, after riding in a carriage or on horseback, there follows—

3. *A discharge of bloody urine* and an increase of catarrhal inflammation of the bladder.

4. Sometimes the pain is not felt in the bladder at all, *but in the glans penis and along the urethra*, which constantly tempts the patient to squeeze and pull at the penis. This condition of things with boys leads to the habit of masturbation, and, by the constant pulling, they produce an elongation of the penis, and hypertrophy of the prepuce.

5. *Strangury*, which commences when the last drops of urine are voided, and continues for a while afterwards.

6. *Sudden stoppage in the flow of urine* (although the bladder be not emptied) by the rolling of a calculus before the opening of the bladder. In other positions, especially that of lying on the back, the urine flows again.

7. Sometimes *a distinct feeling*, as though something were wedged into the neck of the bladder, causing difficulty in making water, when a calculus has been driven into the opening at the neck of the bladder.

8. *Reflected pains*, as spasms in the rectum, vagina, testicles, kidneys, perinæum, legs, &c.

9. In rare cases, when there are many stones in the bladder, on succussion of the body, they may even be heard and felt rattling in the bladder.

10. Examination by the metallic sound reveals a hard body, which, on being struck, gives a metallic sound.

Therapeutic Hints.—Large stones, it is true, cannot be dissolved again, but belong to the domain of surgery. But it is a question whether we cannot do something *to prevent their formation*. According to our records a number of remedies have shown themselves efficacious in expelling gravel, and in restoring a normal secretion of urine. If such be the case, is it not equal to preventing larger conglomerations? and is not one pound of prevention worth more than ten pounds of cure?

Moreover, it is true that all who suffer with gravel need not necessarily become affected with stone in the bladder; just as every one who falls need not necessarily break his neck. But who can tell beforehand the result in either case? The remedies, after the use of which gravel and small stones have been observed to be discharged, are: Aspar., Calc. c., **Calc. urinaria**, Cannab., Ipomeanil, (Jeanes,) **Lyc.**, Nitr. ac., Nux v., Petr., Phos., Puls., **Sarsap.**, Sulph., Tabac., Uva ursi.

Amongst the new remedies are mentioned, Alnus rubra, Chimaphila, Collins., Corydalis, Erigeron, Eryngium, Eupator. arom. and perf., Frasera, Galium, Gossypium, Podoph.

For particulars, study renal colic, catarrh of the bladder, and the materia medica.

As I have commenced the diseases of the urinary system with an *examination of the urine*, so shall I conclude this chapter by a short commentary ON MICTURITION, OR THE VOIDING OF URINE.

A *full, energetic stream* is a sign of a normal condition of the bladder and urethra.

A thin stream, with difficulty in passing, indicates narrowness, constriction, stricture in consequence of inflammation, or obstruction by foreign bodies, or compression by the swollen prostata, or spasm of the neck of the bladder, or stone in the bladder.

A feeble stream is found in old age, during general exhaustion, in consequence of beginning paralysis of the bladder, from mechanical obstruction in the bladder or urethra.

A divided stream may originate in a partial sticking together of the orifice of the urethra, in inflammation, mucous secretion, ulceration or constriction of the urethra, or in consequence of diseases of the prostatic gland.

An oblique, crooked stream is caused by a diseased state of the urethra near its orifice; also by swelling of the prostata and by stone in the bladder.

An interrupted stream always denotes mechanical obstruction, as stones, blood-coagula, &c., or spasmodic action in the urethra or bladder.

A stream in jerks is caused by spasmodic action of the bladder and sphincter.

Frequent, almost constant urging to make water, although there is only little urine voided, is a sign of inflammatory or spasmodic conditions of the urinary organs, and occurs likewise in consequence of using various medical drugs.

In women it is frequently a forerunner of the monthly period, and after coitus, a sign of conception, or incipient leucorrhœa. During pregnancy, in the first month it is observed, especially in the morning after getting up; and in the last month it is caused by the pressure of the enlarged uterus. So it is also frequently found during parturition, or in threatened abortus. If it continues after birth it is a sign that the neck of the bladder and the urethra have been bruised during parturition. A constant urging to urinate, with but little dis-

charge, in small-pox, is a bad sign; and in scarlet fever, if it sets in suddenly, denotes a disturbance in the eruptive process and a metastasis to the brain.

In chronic diseases it is a forerunner of dropsy.

Difficult urination, dysuria, is found in all inflammatory affections of the urinary organs. When the passage of urine is possible only with the body bent forwards, legs far asunder, it denotes an enlargement of the middle lobe of the prostatic gland, especially if it commences and ends with urging, and leaves the feeling as though a hard lump of feces ought to be discharged still. The urine generally flows more freely the less the patient presses. When the urine passes most easily while lying on the back, it is a sign of stone in the bladder, tumors in the rectum, or anteversion of the womb.

When the urine is voided only by external pressure upon the lower part of the abdomen it indicates a paralytic state of the bladder.

Involuntary discharge of urine is most frequently found in women from a concussive exertion of the body when coughing, sneezing, vomiting, or laughing; from mental emotions, like fright, the hearing of music, or strong smells. It seems to be an irritated state of the sphincter vesicæ, and is found especially frequent during pregnancy.

Involuntary discharge of the last remaining portion of urine seems to be characteristic of strictures of the urethra; whilst *if it commences to flow from a pressure upon the lower part of the abdomen* it indicates a paralytic state of the bladder. In *children* it may be bad habit or weakness.

In *fevers* it denotes great prostration and a rather precarious state of things.

After injuries of the head and spine it is always a bad sign.

Constant dribbling of urine is a sign of paralysis of the sphincter vesicæ; or, after external injuries, a sign that the continuity of the parts is broken. It is likewise found in inflammatory diseases of the bladder, in stone-diseases, in consequence of the pressure of large tumors upon the bladder. In young girls it is sometimes a forerunner of the beginning of menstruation; it ceases afterwards by itself. After childbirth it is a sign that the neck of the bladder has been violently bruised during the act of parturition. In fevers, especially typhoid, it belongs to the most serious symptoms, indicating a general exhausted state and beginning of paralysis.

Unconscious flow of urine we find frequently in children during deep sleep, also during sopor and fevers, in the highest degree of exhaustion and prostration, in paralysis of the lower extremities.

Retention of urine—no flow at all—has its cause either in the ureters, as when they are plugged up or constricted; or in the bladder, as when it is either paralyzed or its sphincter spasmodically contracted; or in the urethra, from obstructions by stones, foreign bodies, swelling or stricture.

Wherever the trouble may be, it is easily revealed by the introduction of the catheter.

For therapeutic hints compare the foregoing chapter.

ORGANS OF GENERATION.

A. MALE GENITALS.

Venereal Diseases.

We understand by this term all those morbid affections of the genitals in particular, and of the whole system in general, which originate *ex usu veneris* in consequence of the absorption of a specific poison. The nature of this poison is as little known as that of small-pox virus, or the infection of scarlet fever and measles; only that it is not volatile, but fixed to the morbid secretion. As to the rest, like either of them, it produces, when introduced into a healthy organism, a certain series of symptoms specific in their nature, by which process the same virus is again produced anew, capable of further propagation. The principal forms caused by this specific contagion are, *gonorrhœa*, *chancre*, and *constitutional syphilis in all its various forms.*

It lies entirely beyond the limits of this work to go into any details in regard to the different views about the identity or non-identity of the venereal virus and its effects, as have been set forth in the last fifteen years by a number of renowned syphilodologists. Their works alone would make up a small library. I shall give merely what seems to be the result of these controversies adopted by the majority at present.

I. Gonorrhœa.

We understand by it a virulent catarrh of the genital organs, which in appearance is entirely analogous to any other catarrhal inflammation of any of the mucous membranes; but which entirely differs

from all the others by being the result of a specific virus, acquired during coition with an individual thus affected.

Its seat is usually the fossa navicularis, and that portion of the urethra which lies back of the glans; sometimes, however, the inflammation extends further back to the bulbus, the membranous portion of the urethra, and even to the neck of the bladder.

In women the inflammation and secretion extend over the vulva, vagina, and urethra; sometimes spreading even into the womb.

Symptoms.

The first symptoms generally appear from three to eight days after the infection, although in some cases even within twenty-four hours, and in others after two or three weeks, and even later. They consist of a tickling sensation at the orifice of the urethra and in the fossa navicularis. Soon there is an increased secretion of mucus in the urethra, which pastes the lips of the orifice together; the tickling changes into burning, and the mucus, at first transparent, becomes thick, whitish, yellowish, greenish, or even bloody, and is more or less profusely discharged. The orifice of the urethra is inflamed and swollen; a tensive pain extends all along the urethra into the testicles and the inguinal regions; micturition becomes very painful and frequent.

In some cases, the so-called *synochal or phlegmonous gonorrhœa*, the inflammation extends into the parenchyma of the glans, which appears darkened and swollen; and into the corpus cavernosum, with exudation, which forms hard places in the penis. This gives rise to the so called chordæ, by which, during erections, the penis is bent either downwards or sideways. The urine can be passed only drop by drop, with the most intense pain and great straining. The discharge becomes still more discolored—dark or bloody, even ichorous; or it is not discharged at all, on account of the high state of inflammation. The prepuce is contracted, and cannot be brought back over the glans—*phimosis;* or it is contracted behind the glans, and cannot be brought forward—*paraphimosis.*

The inflammation spreads even to the neck of the bladder and the neighboring areolar tissue, in consequence of which abscesses may form and break through the perinæum, giving rise to fistula urinæ.

Other cases, the so-called *indolent or torpid gonorrhœa,* are attended with very little pain; and the only symptom which is of any inconvenience to the patient is a more or less profuse mucous discharge. This indolent form is usually found in persons who have had the

disease several times. It seems, that the system gets accustomed even to the most violent poisons, as may be seen in prostitutes. Yet, innocent as it seems, it is generally very obstinate, and is apt to become chronic; and if transferred to other persons not quite so hardened, it may cause the most virulent symptoms. In still other cases—the so-called *erysipelatous gonorrhœas*—the glans and prepuce are œdematously swollen and inflamed, as in erysipelas. The pain is not so great as in the synochal form, and the discharge is of a more watery, ichorous nature.

Mild forms of acute gonorrhœa are said to run their course in about five or six weeks; but most cases assume a chronic form and are then called *gonorrhœa secundaria* or *gleet*. This form is usually without pain; when there is any, it is a fixed pain in the fossa navicularis. The discharge is mostly watery, sometimes thick and yellowish. Usually there is only a single drop, and that to be seen in the morning; at other times the lips of the meatus urinarius merely stick together; sometimes, however, the discharge continues to be more or less profuse. This state of things may last, with various degrees of severity, for months, even years.

In the female the symptoms of gonorrhœa are nearly the same; generally, however, they are less painful, because the *vagina*, the part principally affected, is wider and less sensitive than the urethra in the male. Still, in high degrees of inflammation, and when extending to the female urethra, the clitoris and the labia, it may become quite as painful. The discharge is then quite profuse and discolored, excoriating the external parts. Frequently it is associated with condylomata on the inside of the thighs and around the anus. Excoriations and ulcers also exist on the neck of the uterus, and sometimes the morbid process extends into the womb and ovaries, causing chronic catarrhal affections there. Its cause is, as stated above, an infection by a specific virus.

Catarrhal inflammation of the mucous membrane of the sexual organs may be brought on by a variety of causes—irritation by foreign bodies, sexual excesses, coitus with menstruating women, or such women as suffer with acrid leucorrhœa. Even drinking new wine or sour beer may cause strangury and a gonorrhœa-like discharge. Such inflammations are of a much lighter nature, and cease in a few days without medication; but as we cannot distinguish between a chronic gonorrhœal discharge and a mere acrid leucorrhœa, it is very well to know that a gonorrhœa-like discharge *may be caused* by a

mere acrid leucorrhœa, if for nothing else that it may preserve the peace of a family.

The gonorrhœal virus is transferrable by the muco-purulent discharge of a gonorrhœal patient, whenever it comes in contact with the mucous membrane of the urethra or vagina of a healthy person. None are proof against the contagion, although some persons are more easily infected than others; and frequent exposure to it seems to harden against it.

Therapeutic Hints.—The number of recommended remedies for this complaint is great, but yet the curing of it is often a difficult task. For its very first stage, Grauvogl has recommended Natr. sulph.; Jahr, Sepia; Wahle, Bryonia; Baehr, Merc. sol; Kafka, Sulph; a number of others, Cannab. Who is right?

In this, as well as in all other cases, we must closely individualize.

Agave americana, excruciating, painful erections; chordæ; strangury; drawing in the spermatic cords and testicles, extending to the thighs, so violent that he wishes to die.

Agnus castus, gleet, yellow purulent discharge; old sinners with sexual inability.

Alum. P. S., gleet.

Arg. nitr., burning in the urethra during micturition, with a feeling as though the urethra were swollen and sore inside; the last portion of the urine remains in the urethra.

Calc. c., gleet, after Sulphur; fat, lymphatic persons.

Cann., great swelling of the prepuce, approaching to phimosis; dark redness of glans and prepuce; light red spots on the glans, of the size of a lentil; inflammatory stage with all its painful symptoms, especially violent burning in the urethra during and after micturition.

Canth., when the inflammation has spread to the bladder, with intense tenesmus; bloody discharge and soreness of the urethra during the flow of gonorrhœal mucus; violent and very painful erections at night.

Caps., white discharge like cream; cutting, stinging pain in the urethra without, burning during micturition.

Ferr., gleet, painless discharge like milk.

Fluor. ac., gleet, little discharge during the night, which makes a yellow stain in the linen; oily transpiration of the genitals with a penetrating smell.

Hydrastis, acute and chronic form; feeling of debility and faintness after each passage from the bowels.

Merc., when complicated with chancre; or in gleet, after Cannabis, when the discharge is yellowish-green and purulent; discharge more profuse at night than during the day. Phimosis, bloody pollutions.

Mezer., gleet; hæmaturia during gonorrhœa.

Natr. mur., after injections of nitrate of silver, in gleet; in gonorrhœa-like discharges from acrid menstrual discharges.

Nitr. ac., in complication with chancres, balanitis and fig-warts; small blisters on the orifice of the urethra and inner surface of the prepuce, forming chancre-like ulcers; painful brown spots of the glans; after mercurial treatment; gleet.

Nux v., after the use of copaiva and cubebs, and after allopathic treatment; dull pain in the back part of the head; hemorrhoidal disposition; constipation; suppressed discharge, with swelling of the testicles.

Petroselinum, troublesome tickling and itching in the urethra, with constant desire to urinate.

Phos., gleet; every morning a drop of watery fluid at the orifice of the urethra, sticking its lips together; also in case of hypertrophy of the prostata.

Phos. ac., gleet; every morning a few drops of a white discharge from the urethra, and in the evening discharge of prostatic juice.

Puls., in consequence of suppression of a gonorrhœal discharge, swelling of the testicles and prostate gland; inflammation of the eyes.

Sarsap., rheumatism of the joints after suppression.

Sepia, gleet, no pain, no discharge, except through the night a drop or so, staining the linen yellowish; frequently quite important for women.

Sulph., gleet; no pain or some slight burning in the urethra; rheumatic pains; chronic inflammation of the eyes; chronic prostatic affections; hemorrhoidal disturbances; psoric cutaneous eruptions.

Thuya, gleet; condylomata; prostatic affections; discharge, thin and greenish; red spots and erosions on the glans; sudden stitches along the urethra from back to front.

Tussilago, acute stage; fixed stinging pain in the fossa navicularis; for persons of high living and irregular habits; chronic stage with inflammation of the eyes and swelling of the testicles, after suppressed discharge.

Besides these, a number of remedies are mentioned and praised by eclectics, (see Hale's New Remedies,) but without the slightest characteristic indications.

Complications and Sequelæ.

1. Orchitis, Swelling of the Testicles.

Usually only one testicle is affected at a time; but the swelling sometimes goes from one to the other. At first the swelling is soft and elastic, but soon becomes hard, red, shining, and very painful to the slightest touch or move; it is usually attended with fever, and follows either upon undue exertions, taking cold, and most frequently after the suppression of the gonorrhœal discharge.

Therapeutic Hints.—Compare Agnus cast., Aur., Clematis, **Merc.**, Nux v., **Puls.**, Rhodod., Rhus t., Tussilago.

2. Prostatitis Gonorrhoica, Inflammation of the Prostata,

Is of rare occurrence, and only in those cases in which the inflammation spreads to the neck of the bladder, or in consequence of suppression of the discharge by injections. It is attended with a sensation of heat in the perinæum, in the region of the bladder, and towards the rectum; and with tenesmus in bladder and rectum. It may end in suppuration and the formation of an abscess, which may discharge its contents into the bladder or urethra, or through the perinæum, or it may end in chronic induration of the prostatic gland.

Compare Merc., Nitr. ac., Phos., Puls., Selen., Sulphur, Thuya.

3. Gonorrhœa Vesicæ,

That is, a transmission of the disease to the neck, or into the body of the bladder, consequent upon suppressing the discharge by injection. The patient feels violent pains in the region of the bladder, the perinæum and anus, with constant urging to urinate. By dint of the greatest straining a few drops only, of a turbid urine mixed with blood and pus, are discharged.

Main remedy: **Cantharides.** Compare Cystitis.

4. Buboes.

Inflammatory swellings of the inguinal glands, which generally grow very slowly, and are brought on either by over-exertion or suppression of the discharge.

Compare Iod., Lach., Merc., Nitr. ac.

5. Ophthalmia Gonorrhoica.

One of the most dangerous inflammations of the eyes; which has bereft many a new-born child of its eye-sight. The infection may be

caused either by the direct contact of the poison with the eyes, by means of the fingers or soiled handkerchiefs, or by metastasis.

Compare Acon., Ars., Bell., Hepar, **Merc. sol.** and **subl.**, Nitr. ac., **Puls.**, Tussilago.

6. Gonorrhœa of the Rectum.

Pain in the rectum; mucous membrane inflamed; sphincter spasmodically closed; discharge of purulent mucus mixed with blood.

Compare Merc., Nux v., Puls., Sepia, Sulphur, Thuya.

7. Strictures of the Urethra.

They consist in a fibrous or callous hardening of certain portions of the urethra, whereby the canal becomes narrowed, and the passage of urine difficult or altogether impossible. Their main seat is the membranous portion of the urethra and the fossa navicularis, although other parts likewise may adhere or become constricted in consequence of inflammation.

The first and main symptom is difficulty in making water. The stream is thin, twisted, split, and flows in jerks. The bladder cannot be fully emptied, and there is a continued dribbling of urine for a great while after micturition.

They are caused frequently no doubt by the use of injections, mismanaged introduction of bougies, the long continuance of chronic gonorrhœa, and excessive indulgence in sexual intercourse.

Compare Clematis, Digit., Dulc., Petrol., Puls., Rhus t., Sulphur.

8. Gonorrhœal Rheumatism.

It is sometimes acute, attacking muscles and joints; and sometimes chronic. It has been frequently observed to follow the use of copaiva balsam, or the sudden suppression of the gonorrhœal discharge by other means, and after taking cold. Those of a rheumatic or gouty disposition are, of course, the most subject to it.

Compare Hepar, Merc., Mezer., Phytolacca, Sarsap., Thuya.

9. General Contamination of the System in Consequence of Gonorrhœa.

Although modern writers deny such consequences of gonorrhœa upon the whole system, there is not the slightest doubt that a suppression of it is followed, in many cases, by severe and deeply-seated ailments. We find cases on record where its suppression brought on

tuberculosis; in others dyspnœa, lasting for many years—until, under homœopathic treatment, an old gonorrhœal discharge suddenly appeared again, and the dyspnœa disappeared. Schœnlein, Autenrieth and others acknowledge this, whilst Ricord denies a specific gonorrhœa-virus altogether, which seems to be driving the thing rather to its smallest point. Grauvogl gives, in his Prophylaxis, a whole list of constitutional disorders growing out of gonorrhœal poisoning, amongst which we find: glandular-like swellings upon the membranes of the brain, on the neck and tongue; in the axillæ and abdomen, and its viscera; deafness; paralysis and mental derangement, &c.

The most important remedies which ought to be borne in mind, and which cover this *gonorrhœal* contamination of the system, as Sulphur does *psoric*, and Mercurius *syphilitic* affections, are, according to Grauvogl, **Natr. sulph.** and **Thuya.**

Chancre.

The name *Chancre* is derived from *cancer;* by which was meant a corrosive ulcer, with hard bottom and callous edges; a description to which the syphilitic ulcer frequently answers. Its seat is the genitals, where the infection chiefly takes place; in males, the parts affected are the glans, prepuce, frænum, front part of the urethra, the penis externally, the scrotum, and even the groins; in females, the labia, vagina, urethra, and even the neck of the uterus. But the virus may also be transferred to other parts which are liable to imbibe it, such as the lips, tongue, nipples, and sore fingers.

There is a great diversity of opinion among old and new writers concerning the question: Whether chancre is ever a merely local affection, or always constitutional? The latest opinion, which seems to prevail among a majority of those who have specially investigated this subject, is the following: There are *two decidedly different kinds of virus;* one, which is said never to cause any but a *local* complaint, viz., at the spot where it is inoculated into the skin, which consists of an ulcer, and sometimes an additional inflammation and suppuration of the adjoining lymphatic glands; the other invariably causes not only a local ulcer, but also a *constitutional* disease, resulting in widespread and deep-seated disturbances of the whole nutritive sphere of the organism.

The *difference* between the two is said to consist in the following: *The simple chancre* develops itself out of a macula or papula, the sur-

face of which continually peels off until the skin appears excoriated; or we see at first a small vesicle or pimple, which gradually bursts; or we observe, what is perhaps the most frequent, a sore, chafed spot, which does not heal, but becomes covered with a dirty exudate, thus gradually forming, in all instances, an ulcer; it may be of quite different aspects. It may eat away the substance upon which it grows, in different directions, and cause sharply-defined edges, as though the substance had been cut out by a sharp instrument, the basis appearing covered with a dirty, fatty-looking substance—*the common, diphtheritic chancre;* or it may be much more superficial, appear only as an excoriation of the external skin, spreading in circumference, but never in depth—*the superficial chancre;* or it may develop itself in a sebaceous gland, when it shows a very small circumference, but appears comparatively deep—*the follicular chancre.* All these different forms of simple chancre may assume a *phagedenic* or even a *gangrenous* character, but neither of them ever develops any *induration* or *hardening* at their basis or circumference, and are therefore called *soft chancres.*

To distinguish *a soft chancre* from other ulcers is not always an easy matter, unless the history of the case decides it at once. To be entirely sure of its nature, it has been proposed to inoculate its secretion upon the thigh of the *patient.* If it takes, it proves to be a soft chancre. The time of incubation is short; in the course of thirty-six or forty-eight hours the effect of inoculation makes itself already apparent.

The *constitutional chancre* develops itself in the following manner: we observe at first a hard papula or a hard knot, may be of the size of a pea or that of a bean or hazelnut.

This induration consists, according to microscopic examination, of an accumulation of cells and granules, without any characteristic peculiarities, which lie imbedded in the normal tissues. The epidermis covering the induration shows at first no morbid appearance, but becomes after repeated exfoliations thinner and thinner, and finally excoriated; now we have an open ulcer, which secretes a scanty, thin fluid. Sometimes it covers itself with a crust, underneath which the hardened place is still progressing to suppuration. It, too, like the soft chancre, may vary in its external aspect.

Constitutional Syphilis.

Niemeyer says: It is a most peculiar fact, that sometimes infection with the syphilitic poison causes quite unmistakable symptoms, and

at other times none, except, perhaps, a swelling of some lymphatic glands. After the healing (I should say suppression) of a primary ulcer, there elapse, as a rule, several weeks before condylomata, exanthemata or other consequences of the syphilitic infection make their appearance. After they disappear, another period of comparatively good health prevails, when again a second series of syphilitic affections develops itself. Such a treacherous change of growing better and worse during the progress of the disease is far from being explainable yet. The interval of time which supervenes between the first healing (suppression of the primary affection) and the appearance of the secondary affections is variable in the different cases. We do not know the influences which shorten or prolong these free intervals; only so much appears evident: a strong constitution and high living seem to shorten these intervals, and, also, the kind of treatment has some influence in that respect.

Bærensprung asserts that under a non-mercurial treatment the free intervals never amount to over six weeks, and that, therefore, any one who had been treated without mercury and remained well for three months, would be declared positively free from constitutional syphilis. A latent state of the disease for ten or twenty years would, therefore, be attributable to mercurial treatment. Such cases, of course, are rare exceptions, if they happen at all, as it is likewise of rare occurrence that secondary symptoms appear whilst the recent chancre yet exists. As a general rule the secondary symptoms do not appear before the lapse of from eight to twelve weeks after the infection, and the same space of time also intervenes between the succeeding states of secondary and tertiary aggravations.

The order in which the constitutional symptoms appear is, as a general rule, the following: indolent buboes, condylomata, exanthemata, superficial ulcerations of the mucous membrane, iritis, all of which are called *secondary affections*. Later, syphilitic lupus, affections of the bones, induration of the subcutaneous, submucous and interstitial tissues, affections of the muscles and inner organs appear, and are called *tertiary affections*. There is, however, in reality no such sharp line of demarcation between these two stages of the disease. Sarcocele, for instance, seems to stand between both of them. There are also cases in which destructive processes in the bones belong to the first, or at least earlier affections of the constitutional contamination, though this may often have its cause in the abuse of mercury.

The outbreak of these constitutional affections is generally preceded and attended by febrile motions of the organism, and when relapses

occur repeatedly, when the violent pains in the bones prevent the nightly rest, when ulcerations and mercurial treatment drain the system of its strength, the patient falls into a state which is termed *syphilitic cachexia*. Its induration may be quite thin; in which case we get the impression, if we pinch up the sore spot into a fold, as though there were a piece of parchment inserted below the ulcer; it is called *the superficial constitutional chancre*. Or we observe an excoriated surface, which is higher than its surroundings, secreting a very scanty, thin fluid, or being almost entirely dry; but exhibiting underneath a more or less deep induration; this is called *the elevated constitutional chancre*. Or we observe finally, that the ulcer has not only a hard basis, but also raised hard and callous edges; so that it appears deeper in the middle than on the edges; this is called *Hunter's constitutional chancre*.

As this constitutional chancre always exhibits an induration at its basis—in fact grows out of an induration—it is likewise called, for contradistinction with the soft chancre, *the indurated chancre*.

The stage of its incubation occupies from three to four weeks; and if its secretion be inoculated upon the thigh of the patient, *it never takes*, thus showing that the virus is pervading the whole system. In this respect it seems entirely analogous to small-pox virus. Neither does it take when the system has been already pervaded by its action; thus procuring an immunity against later infection. The indurated chancre also differs from the soft in the following particulars: it is *indolent*, not painful; generally appears *solitary*, except when the virus entered the system at different places *at the same time*, and on healing scarcely ever leaves a cicatrix, as the soft chancres almost always do.

The susceptibility to both kinds of virus seems alike great in all ages, sexes and constitutions; neither does an infection with the one hinder an infection with the other; hence we may find both kinds of chancre in one and the same individuum at the same time. The infection generally takes place in consequence of impure coitus, but also utensils, cloth, &c., if they be soiled by the virus and brought into contact with any sore or denuded part of the body, may produce the same effects. The constitutional poison is likewise carried by the blood; and so it may happen that a healthy child may become infected by vaccination, if the vaccine matter is taken from an infected child, and should contain some blood of that child. The natural secretions—for example, the saliva, or morbid exudates of intercurring diseases—seem not to contain the virus; whether milk does or does not, is still a mooted question.

The first sign of healing in a soft chancre is the cleansing of the dirty-looking basis, and the forming of new granulations upon it, by which the ulcer gradually closes, leaving almost always a more or less marked cicatrix. The indurated chancre gradually loses its hardness: or, what is quite remarkable, the induration commences to disappear as soon as secondary symptoms of the disease develop themselves on other parts of the body; it leaves a discolored spot on its site, which is of a brown-red or coppery color, and which does not disappear as long as the syphilitic poison exists in the organism.

Therapeutic Hints.—This new view in regard to the double nature of the chancre virus has brought about a great change in the allopathic treatment. Where the old school formerly poisoned almost every one who had any kind of chancre, by massive doses of different mercurial preparations, they now try to destroy all so-called soft chancres by external applications of some caustic, and apply the mercurial treatment only to the so-called indurated chancres. Such crude ideas of the organism as that a poison could be stayed to one small part only, and thrive there, and do all kinds of mischief without involving more or less the whole organism, are altogether incompatible with Homœopathic experiments. It matters little to Homœopathic treatment whether the new theory be right or wrong. All such general views furnish no indications for it. We have here, as in all other cases, to *individualize;* and if we find, with Hahnemann and the allopathic school, that *mercury* is, up to the present time, the most specific in this complaint, it is on account of its ability to bring on a similar state in the healthy organism.

Merc. sol., in all simple, recently-acquired soft chancres, of a superficial and regular form, and a free secretion of thick pus.

Merc. subl. corr., when the chancre assumes a phagedenic appearance, and secretes a thin, ichorous pus.

Merc. precipitatus ruber, when Solubilis effects no change within eight or ten days; indurated chancre, old, obstinate chancres; indurations after cauterization; excoriations on the glans; extuberances of the ulcers; and inflamed buboes.

Merc. Cinnabaris, in old, neglected, or badly-treated indurated chancres, when even Prec. ruber is of no avail; elevated chancres; exuberant granulations of the base of the ulcers; hard, callous, raised, indolent edges of the ulcer; mucous condylomata on the genitals, anus and lips; indolent buboes.

Merc. jodatus and **bijodatus**, when a great deal of mercury has been

taken; when, after the healing of the ulcer, there still remains an induration; indolent buboes; indurated glands and indurated chancres; indurated superficial chancre.

Merc. nitrosus, in old, obstinate cases; dry fig-warts on thread-like pedicles; also soft, pointed condylomata.

Nitr. ac., *in old cases after the abuse of mercury;* unpainful ulcers, with gray, everted edges, easily bleeding; or superficial or elevated ulcers, with zig-zag edges; or ulcers with hard, callous edges; or ulcers with a dark, bluish, dirty basis, covered with a crust, from under which is issuing ichor, or with exuberant granulations, forming a red, spongy basis, like raw flesh; mucous, moist and other condylomata, like cauliflowers or pin-heads on thin pedicles; inflamed buboes.

Kali bichr., when the ulcer is round and deep.

Kali hydroj., *after the abuse of mercury;* deep ulcers, with hard edges; buboes; mercurial diarrhœa, with tenesmus; nightly pain in bones; falling out of the hair.

Lachesis, when the areola of the ulcer assumes a bluish color.

Arsen., when the chancre assumes a gangrenous aspect.

Thuya, mucous and cauliflower-like excrescences (condylomata) which are moist; elevated ulcers, with exuberant granulations; after Nitr. ac.; erosions on the female genitals, with abundant mucous secretions; also erosions and rawness between the legs and on the sides of the scrotum, constantly oozing a moisture; suspicious-looking ulcers on the penis, cavity of the mouth and throat.

Besides, the following are recommended: Jacaranda caroba, Myrica urifera, Phytolacca, Sanguin.

Condylomata, Sycosis, *Fig-warts.*

These excrescences are a morbid growth of the skin and mucous membrane, or, better defined, of the subcutaneous and submucous cellular tissue. They are of different external appearance, according to their coating. When they are covered by the epidermis, they appear dry, hard, horny, like common warts; when covered with thin epithelium, or when they are entirely bare and excoriated, they appear soft, moist, and secrete more or less of a slimy, acrid, badly-smelling fluid. These latter are the *genuine syphilitic condylomata* or *tubercula mucosa.*

Their forms are likewise various; some are flat, upon a broad basis; others are conical, growing on a pedicle; others appear like a cock's-

comb. The *flat* fig-warts are chiefly found around the anus, between the glutæus muscles; on the perinæum, scrotum, external skin of the penis, glans penis, and on the external surface of the labia in women; whilst the *conical and pediculated* are usually formed in the entrance of the vagina, on the clitoris and even far back in the vagina, and on the neck of the womb; in males on the interior surface of the prepuce; also between the nates. They sometimes grow so luxuriantly that the whole vagina and interior surface of the prepuce is covered by them. A third kind is quite small, in the shape of pins' heads, which are generally formed around the corona in men, and on the interior surfaces of the labia in women. In secondary syphilis they appear also in other localities, especially on the tongue, corners of the mouth, chin, face, forehead, eyelids, iris, scalp, meatus auditorius, axillæ, nipples and between the toes. Soon after the outbreak of this pest in the middle ages, we read of condylomatous excrescences in the face, which were a finger's length, and which caused for their bearers more ridicule than compassion.

Therapeutic Hints.—For the *mucous tubercles* the main remedies are Cinnabaris, Sublimate, Nitr. ac., Thuya.

Fig-warts, when complicated with *gonorrhœa*, require Thuya, Sublimate, Cinnab., Nitr. ac., Sul., Lyc.

When complicated *with chancre*, Cinnab., Nitr. ac., Phos. ac., Staph., Thuya.

When *flat*, Magn., Nitr. ac.

When *exuberant*, like cauliflowers or mulberries, Thuya, Staphis.

When *fan-shaped*, Cinnab.

When *growing on pedicles*, Lyc., Nitr. ac.

When *conical*, Solubilis.

When *dry*, Thuya, Staph., Solub., Sublim., Nitr. ac., Lyc.

When *moist*, *suppurating*, Nitr. ac., Thuya, Sulph., Euphrasia.

When *soft*, *spongy*, Sulphur.

When *intolerably burning and itching*, Sabina.

The Inguinal Bubo

Consists of a swelling of the inguinal lymphatic glands, with a tendency to the formation of abscesses in consequence of syphilitic infection. It is the first sign of constitutional contamination by the syphilitic virus. As chancres may appear on other parts besides the genitals, so, also, do buboes appear in other parts: in the axilla, under

the maxilla, on the neck. Buboes may also form primarily (without previous chancre on the penis) by immediate absorption of the syphilitic virus. The period of time which elapses between the first appearance of chancre and that of bubo varies from eight days to six weeks.

Symptoms.

Before any thing can be seen the patient experiences a painful tension in the inguinal region, which sometimes extends into the thigh, making walking quite difficult; soon after the patient feels feverish, chilly, and there appears a roundish swelling in the inguinal region, which is painful to contact and motion. It is usually hard, grows, in the course of some days, to the size of a pigeon's egg, and larger, and becomes dark red. If not arrested in this stage it soon commences to assume a more doughy feel, with painful throbbing; finally it fluctuates, breaks, and discharges a quantity of thick pus, which at last becomes more watery; now it heals, either like any other abscess, or the wound assumes a chancre-like aspect, with hard, callous edges. In bad cases, it may even assume a phagedenic or gangrenous form, and cause terrible destruction of the surrounding parts.

All buboes do not run this acute course. The so-called *indolent, torpid* or *atonic* buboes form quite slowly, without pain or fever, and continue so until they reach a certain size, which they retain in a seemingly unaltered condition for weeks, or even months, until they finally suppurate and discharge. The so-called scirrhous bubo may remain for years in the same condition.

Its *diagnosis* is easy enough, if we ascertain the pre-existence of chancre. It may, however, be confounded with an incarcerated testicle within the abdominal ring; therefore, Ricord advises first to count the testicles before pronouncing an inguinal swelling a bubo. The inguinal glands may swell from other causes. In children, scrofulous swellings of these glands are not unfrequent. We shall, in some cases, no doubt, have to fall back on the history of the case, which may tax our skill in cross-examination.

Therapeutic Hints.

Ars., when the open bubo assumes a gangrenous aspect.

Aurum, after the abuse of mercury, with nightly pains in the bones.

Badiaga, bubo stone-hard and uneven, a conglomeration of indurated glands; violent stitching pain through it at night, as though a red-hot needle were thrust into it. Suppressed chancre by cauterization and mercurial ointments, leaving elevated and discolored cicatrices: general cachectic appearance and rhagades of the skin, here and there.

Carbo an., for hard buboes which threaten to suppurate; it causes resorption where there is even some fluctuation discoverable; old, maltreated buboes, cut open or cauterized, presenting large, terrible ulcers, with callous edges and a secretion of offensive ichor.

Hepar, after the abuse of mercury, for open buboes, which do not heal, and when there is a psoric taint of the system.

Kali hydroj., after mercurial treatment; ulcerating bubo, with fistulous openings, and discharge of dark, thin, offensive, and corroding ichor.

Lachesis, old protracted syphilitic mercurial buboes; hectic fever, sore throat, and the most violent headache, either in the back or front of the head.

Mercurial preparations, compare what has been said under the chapter on Chancre.

Nitr. ac., after the abuse of mercury, when Carbo an. has not been sufficient to reabsorb the swelling, and especially if the still existing chancre presents exuberant granulations on its base.

Sulphur and **Silicea** are especially indicated for old discharging buboes which do not heal, although other syphilitic symptoms have disappeared.

Besides these remedies, there have been recommended Buboin, Phytol., Sanguin.

Balanitis, Gonorrhœa Spuria or Præputialis.

This affection is a profuse secretion of mucus between the glans penis and prepuce, which is formed only in men with a long foreskin. It is sometimes associated with genuine gonorrhœa; but may just as well originate from uncleanliness, frictions, coitus with women who suffer with acrid fluor albus. Much more often it is altogether an innocent affair; although in some cases it may be of a poisonous nature.

Symptoms.

Itching underneath the prepuce, which appears red and moist. In a few days there appear heat, pain, and swelling of the prepuce, with considerable discharge of a yellowish, purulent mucus. Sometimes it is very difficult to push back the prepuce, in which case the glans appears excoriated. If allowed to remain, adhesions and abscesses may form between the glans and the prepuce, and cause considerable trouble. If of an innocent nature, it is easily managed by cleanliness and perhaps one dose of Merc.; if it is in connection with gonorrhœa

or chancre, it of course assumes the habits and manners of its companions, and requires the same treatment. Compare also Jacaranda caroba.

Syphilitic Skin-Diseases.

Soon after the outbreak of the disease, during the middle ages, the skin affections succeeding syphilis were of a much more violent character than they are now, so that they frequently disfigured the face in a terrible manner. In after years they lost this violence, until, towards the end of the eighteenth century, in consequence of those revolutionary wars which mixed all nations together, syphilitic skin-diseases seemed to become more frequent again. Since that time they have been studied more closely, and divided into different classes.

The premonitory symptoms to their appearance, after the syphilitic poison may have lingered for years in the system, are often: wasting away; pale, dirty, and icteric color of the skin; rheumatic and gouty affections; hemicrania or clavus; indigestion; bad breath.

Their color is mostly livid or copperish, although this may be wanting in some cases, and be present in others of no syphilitic origin.

Their form is usually roundish, although they assume various shapes when the eruption is confluent.

Their seat is especially the scalp, forehead, alæ nasi, corners of the mouth, chin, cheeks, whiskers, and ears. Less frequent, the palms of the hands, soles of the feet, roots of the nails, the shin-bones, wrist-bones, and ankles of the feet. Finally, every part of the body may become invaded. They are always of a *chronic nature*—portions of them die away, and fresh groups appear; and, what is quite characteristic, they change *their forms frequently*—one kind of eruption disappearing, and another kind taking its place. These symptoms are neither *very painful*, nor do they *itch much*. In their later stages they frequently form thick crusts, which are said to spread a *peculiar specific odor;* which may be true of the *worst forms* of the disease.

The *general appearance of the skin* is, in light cases, not altered; in deeply-seated cases, however, it appears dirty, pale, yellowish, or as if covered with iron-rust. The latest writers on this subject distinguish the following forms of syphilitic eruptions:

1. Maculæ, or syphilitic discoloration of the skin in spots, *roseola syphilitica*.

2. PAPULÆ, or syphilitic pimples—*lichen syphiliticus.*

3. PUSTULÆ, or syphilitic pustules, resembling small-pox; wherefore the French call syphilis also verole grosse, or, shortly, verole—*acne syphilitica.*

4. SQUAMÆ, or syphilitic squamous skin-diseases, which are characterized by patches of unhealthy cuticle, on an inflamed base—*psoriasis syphilitica;* its seat is generally in the palms of the hands and on the soles of the feet.

5. VESICULAR ERUPTIONS AND BULLÆ, large vesicles, are of rare occurrence, but are found here and there as *rupia syphilitica* and *pemphigus syphiliticus.*

6. The worst forms are the SYPHILITIC SKIN TUBERCLES, which, if they inflame and dissolve, constitute the *lupus syphiliticus;* destroying the cutis to a smaller or larger extent. Sometimes they are single, and may form into deep ulcers, or become absorbed, or calcinated, when the external skin sinks in at that place; sometimes they are found in clusters upon the extensor side of the extremities, and in the region of the shoulder-blades.

7. FALLING OUT OF THE HAIR; and

8. DEFORMITIES OF THE NAILS, which either grow crooked, or split, or are thrown off altogether. The principal remedies from which to select are the different *mercurial preparations,* Nitr. ac., Thuya, Aurum, Lyc., Staph., Kali hydroj., Lach., Sulph., Hepar, Sarsap.

Syphilitic Affections of the Mucous Membranes.

Their most common seat are the tonsils, the uvula, and the velum palati. But they frequently spread to and upon the fauces, through the posterior nares into the nose; or, in front, over the roof of the mouth. Their appearance differs little from that of primary chancres on the genitals. Their development is slow, and in this way they are distinguishable from acute sore throat. *Mercurial* ulcers are chiefly found on the inner surface of the cheeks, whilst *scorbutic* ulcers generally attack the gums, which are swollen and of a dark-red appearance. *Cancer* of the tongue is found mostly on the edges of the tongue, whilst syphilitic ulcers form more on the middle or under the tongue.

Syphilitic affections of the mucous membrane of the nose may be confounded with *chronic coryza;* but then the discharge soon takes on an ichorous form.

In syphilitic ulcers of the *rectum* there is a purulent discharge; and in syphilitic affections of the *bladder* it takes the form of a chronic

cystitis. In all such cases the ascertaining of previous syphilitic infection is an indispensable requirement for a sure diagnosis. In secondary ulcers of the throat and nose the most important remedies are: Kali bichrom., Sanguin., Aurum, Nitr. ac., Lyc., Cinnab., Sublim., Thuya, Laches., Kali hydroj., Mezer.

Iritis Syphilitica.

The sclerotica and conjunctiva are inflamed; there is quite a distinct *red ring* around the cornea. The cornea grows opaque, and the iris loses its natural color, and grows paler. The pupils are drawn together, or into an irregular shape. The patient cannot bear the light; has great pain in the supra-orbital region; worse at night. Exudation in the anterior chamber of the eyes takes place; in consequence of which the pupullæ are gradually shut up.

Therapeutic Hints.—Sublim., Nitr. ac., Thuya.

Syphilitic Affections of the Periosteum, of the Bones and Cartilages.

They are always attended with severe pains in the bones, of a boring, grinding nature, and always worse at night from nine o'clock in the evening till towards morning, when, with a slight perspiration, they usually abate. Gradually a structural change is observable; the periosteum commences to swell, forming so-called *tophi*, and when the inflammation spreads to the bones, causing swelling of the bones, (*exostosis*,) which may terminate in necrosis and caries. Such structural changes attack the skull bones, which, when they are on the inside, may cause convulsions, paralysis, amaurosis and deafness. Those which attack the bones of the nose cause horrible disfigurations of the face. It also attacks the vertebræ, destroying portions of them, and *cartilages*, although not so frequently. The cartilage of the nose is destroyed as well as the bones, and instead of the nose, nothing is left but a hole in the middle of the face. The cartilage of the sternum and the cartilages of the larynx have been found destroyed.

Therapeutic Hints.—*Pain in the bones,* Aurum, Guajacum, Mezer., Nitr. ac., Phos., Phos. ac., Staphis.

Tophi and exostosis, Aurum, Fluoric ac., Lyc., Mezer., Phos., Phos. ac., Staphis., Sulphur.

Caries and necrosis, Aurum, Fluoric ac., Kali hydroj., Nitr. ac., Silic.

Sarcocele Syphilitica,

An exudation of coagulable lymph into the substance of the testicles, whereby the tubuli uriniferi become gradually obliterated. It manifests itself as a gradually growing, sometimes entirely painless swelling of the testicle, commencing at the testicle itself, not like in epididymis gonorrhoica, at first in the epididymis. It is indicative of its syphilitic origin, that both testicles, one after the other, are often attacked. Sometimes it is combined with hydrocele.

Syphilitic Contractions of Muscles and Tendons.

These take place in rare cases, where the syphilitic virus attacks the muscles and tendons, causing plastic exudation within and around them, and thus shortening them.

Gummata in the Cellular Tissue.

These usually form at a later period, and appear as little, painless, movable kernels under the skin. They grow slowly and commence finally to suppurate, leaving deep, cicatrized holes, or chronic ulcers.

Syphilitic Affections of Inner Organs.

a. BRAIN AFFECTIONS. They manifest themselves by various affections, as, violent headaches, hemicrania, sleeplessness, dizziness; as, hemiplegia, imbecility of mind, amaurosis, deafness, epilepsy, catalepsy, and are caused either by chronic inflammation of the membranes, or formations of tubercular masses, or syphilitic exostosis on the inner plate of the skull bones.

The diagnosis is difficult. We may suspect such changes, if we find a right to do so from the history of the case.

b. LUNG AFFECTIONS set in frequently in consequence of suppressed chancres, either as tuberculosis, as ulcerative processes, as bronchitis and asthma.

c. LIVER, SPLEEN, INTESTINAL AFFECTIONS, of which we have spoken above.

Syphilis Infantum Congenita et Hæreditaria.

In some cases the child is destroyed by syphilitic infection whilst yet a fœtus; in other cases the child is born with all signs of

syphilis; and in still other cases the child seems apparently well after birth, when some weeks and months after, and in some cases not before the age of puberty, the concealed disease breaks forth.

The infection may take place in different ways:

1. *Both parents* are affected with syphilis at the time of generation. In this case the fœtus dies, usually between the fifth and seventh month of pregnancy.

2. The *father* only is affected with syphilis, and lays by his contaminated semen the root of syphilis of his offspring. In this case the child may be born apparently healthy, being sustained by the healthy blood of its mother; still the inherited germ will show sooner or later.

3. The *mother* only is affected, and by her poisoned blood the fœtus becomes thoroughly imbued with the syphilitic virus and is destroyed, either before birth, or it comes into this world with visible signs of the dreadful malady.

4. The child may be infected by primary or secondary syphilitic ulcers of the nipples of the wet-nurse.

5. The child may become infected by the *milk* of the nurse just as well as by the blood of the mother.

6. The infection may take place during the act of parturition, if the mother contracted towards the end of pregnancy the terrible disease.

Symptoms.

When a deep-seated syphilitic dyscrasia is transferred to the fœtus, the child, if born alive, has a peculiar oldish appearance; a weak, plaintive voice; its nose is stopped up; the corners of its mouth are sore; its small body is covered, or soon covers with copperish spots, which generally appear first in the palms of the hands and soles of the feet, gradually spreading over the whole body; they fill in a short time with a turbid fluid, and raise the epidermis into blisters, which burst and leave excoriated places.

This malignant affection has been described in books as *pemphigus neonatorum*. Sometimes the only apparent symptom is a stoppage of the nose with discolored, purulent discharge, excoriating the external nose and upper lip, and covering with black crusts.

Where the syphilitic dyscrasia of the parents is not so intense, the children of course are not so intensely affected, and the infection may not show the first six weeks, or previous to dentition, or even before the time of puberty. In such cases syphilis is often mistaken for scrofulosis, and its occurrence has been denied altogether. But there

are undoubtedly such cases. When the child becomes infected after birth by the nurse, the first symptoms appear on the lips and corners of the mouth; these form pustules and ulcers in the face, later in the throat, and at last on the genitals, and condylomata around the anus. By-and-by, if the disease is allowed to progress still further, superadded to all this are blennorrhœas of the eyes, nose, ears—in girls, of the vagina, followed by hectic fever, emaciation, and colliquative diarrhœa. The little sufferers contract that peculiar oldish appearance, and die at last of atrophy, with convulsions.

The horrid disease may be spread by such an innocent victim through whole families, if the greatest care and cleanliness be not exercised.

Therapeutic Hints *for Constitutional Syphilis.*

Arg. nitr., chancre-like ulcer on the prepuce; urethra swollen, hard and knotty; sexual desire gone; the genital organs having become shrivelled; cock's-comb-like fig-warts around the vulva.

Arsen., gangrenous and serpiginous ulcers; tubercular syphilitic skin diseases.

Aurum fol. and **muriaticum**, after the abuse of mercury; secondary ulcers on the scrotum; nightly pain in the bones; swelling of the skull-bones; swelling of the periosteum of the fore-arms and shin-bones, caries of the roof of the mouth and nose; ulcers on the tongue; falling out of the hair, and great nervous weakness; utter despair and prostration of soul and body.

Badiaga, whole convolutes of hard glandular swellings, buboes.

Carbo. an., buboes; gummata; skin tubercles.

Caustic., fistulous ulcers; corrosive ulceration of skin tubercles; lupus; complication with gout and scurvy.

Corallea rubra, syphilitic erosions, exuding a thin, badly-smelling ichor; constant trickling of mucus from the posterior nares into the fauces.

Euphras., old, broad condylomata at the anus, with much burning, especially at night.

Ferrum jodat., recommended for mercurial cachexia.

Fluor ac., skin tubercles on the forehead and face, even when ulcerating; squamous eruptions on the body, (psoriasis guttata;) syphilitic erosions, mucous tubercles; exostoses and nightly pains in the bones.

Guajac., tearing and stinging in the limbs; aching in the bones with swelling; tearing pains in the skull and bones of the nose; itching, tetter-like eruptions.

Hepar, *after the abuse of mercury;* falling out of the hair; painful lumps on the head, and nightly pain in the skull-bones; soreness of the nose on pressure, with red, inflamed eyes; eruptions around the mouth; ulcerated gums, with flow of saliva; swollen tonsils and hard glandular swellings on the neck, with sticking when swallowing, coughing, breathing, or turning the neck, as though a fish-bone had stuck fast; suppurating buboes in the inguinal region and axilla; green, slimy, bloody stools; inflammatory swellings of the knees, hands, and fingers; ulcers, with nightly burning, throbbing and stinging, bleeding easily; nightly pain in the limbs, with chilliness; great nervous weakness.

Iodium, mercurial cachexia; salivation; ulcers in the throat.

Kali bichrom., deep ulcer on the edge of the tongue; ulcer on the velum palati, eating through; fetid discharge from the nose; caries of the bones of the nose, with profuse purulent discharge from the nose; suppurating, solitary skin-tubercles, forming deep holes.

Kali hydroj., *after the abuse of mercury;* deep chancres, with callous edges; buboes, ulcerating, with prominent edges; tuberculous pustules in the face; roseola on chest and extremities; discolored, large ulcers on the skin; swelling of the bones; nightly bone-pain; bloody stools, with tenesmus; falling out of the hair.

Lachesis, mercurial syphilis, with ulcerated sore throat, causing a constant provocation to cough, with retching; painful deglutition; regurgitation of drink through the nose; earthy, yellowish appearance of the face, with small red blood-vessels shining through the skin; coryza, nose red and sore; terrible headache; nightly pain in the limbs.

Lycop., secondary, tettery-like eruptions and ulcers in the throat of a dark, yellowish gray color; cough and hoarseness, from similar affection of the larynx; coppery eruptions on the forehead, and cachectic appearance of the face; dry, pediculated, painless, condylomata on the sexual organs; nightly pain in the limbs during wet weather; low-spirited; desponding; nervous weakness.

Mercurial preparations, compare Chancre.

Mezereum, mercurial syphilis, with or without affection of the bones; chronic sore throat; dark redness of the fauces; worse every winter, with burning dryness extending into the larynx; hoarseness; hawking of phlegm.

Natr. sulph., granulated inflammation of the inside of the eyelids; swelling and suppuration of the axillary glands; ulcer on the outer side of the thigh; knotty, wart-like eruption on the anus; between

the thighs; on the forehead, scalp, back of the neck, and chest; swelling of the ribs near the sternum; stiffness of knees, and cracking of joints; pain in the bones. Compare Thuya.

Nitr. ac., mercurial syphilis; tonsils red and swollen, uneven, covered with little ulcers of the size of a pin's head; soft palate, highly inflamed; deep, irregular-shaped ulcer on the edge of the tongue; single, moist sores on the scalp, burning; suppurating pustules all over the face, with broad red circumference, forming crusts; large, soft protuberance on the wings of the nose, covered with a crust; brown spots on the glans, of the size of a lentil, peeling off; squamous eruption, like psoriasis; hard, brownish, little knots on the scrotum and perinæum, which suppurate.

Phos. ac., mercurial syphilis; ulceration of the lips, the gums, and the soft palate; swelling of the bones; pain in the bones; condylomata, carbuncle-like ulcers of the skin, with a copper-colored circumference.

Phos., syphilitic psoriasis in the palms of the hands and the soles of the feet; syphilitic roseola; squamous eruptions; mercurio-syphilitic ulcers on the prepuce; bone-pain and exostosis.

Phytolacca, sore throat; ulcers on the genitals; severe pains in the arms and legs, from the elbows and knees down to the fingers and toes, with œdematous swelling of the affected parts; pain aggravated by motion and contact; feet and legs covered with pale, red spots, about the size of a dime; more scattered on the arms, face and neck; previous use of mercury.

Psorinum, moist, itching and burning condylomata on the prepuce; sore corners of the mouth; dry, tetter-like eruptions in the hollow of the knees.

Sabina, fig-warts, with intolerable itching and burning; exuberant granulations.

Sanguin., roundish or oval, whitish and raised patches on the mucous membrane of the mouth, nose, prepuce and anus; a diphtheritic exudation, which, when wiped off, leaves a raw surface behind; congestion of the head; throbbing headache from the nape of the neck to the head; swollen veins in the temples.

Sarsap., mercurial syphilis; squamous eruptions; bone-pain.

Sepia, syphilitic erosions in women.

Staphis., *mercurial syphilis;* dry, pediculated fig-warts and mucous tubercles; nervous weakness.

Silicea, mercurio-syphilitic ulceration of skin and bones.

Sulphur, *mercurial syphilis;* itching ulcers, which are soon covered

with a crust; thick crusts on the prepuce discharging pus from underneath; cock's-comb-like excrescences on the glans, soft, spongy, easily bleeding; moist condylomata on the genitals; excoriations on the genital organs, with burning; copper-colored spots on the forehead; hard, large and inflamed buboes; obstinate gleet.

Thuya, syphilitic erosions in the female genitals, with profuse gonorrhœal discharges; erosions between the thighs and on the sides of the scrotum; in the fauces, with mucous tubercles; redness in the fauces; condylomata; tubercula mucosa.

Besides all these remedies we find a number of others mentioned and recommended in Hale's New Remedies, amongst which the following seem to be the most important: Asclep. syr., Corydalis, Iris and Lobelia.

Diseases of the Testes.

Hydrocele.

The testicles and epididymis are enclosed within a serous membrane, like the peritoneum, from which, in fact, it is a mere continuation. As such, it is a shut sac, and consists, like the pleura and the peritoneum, of two blades, *the tunica vaginalis propria* and the *tunica vaginalis reflexa.* Like all serous membranes, it is liable to exudation, and if that takes place, it constitutes what is called *hydrocele or dropsy of the scrotum.*

It is either a symptom of general dropsical disposition, in consequence of hydræmia, as found in old age, or in consequence of tuberculosis or other chronic diseases, corresponding entirely to hydrothorax and ascites; or it is the result of some inflammatory or mechanical irritation, in consequence of orchitis, urethritis, or in consequence of external injuries—a bruise, a fall, a kick, &c., as found in otherwise healthy and young persons, even in children, and then it corresponds to pleuritic and peritoneal effusions. This latter may become chronic, and the secretion of serum continue so that the swelling attains the size of a head. The scrotum then appears smooth, tense, glistening; the testicle is compressed, becomes atrophied, and may gradually disappear; then it presents the appearance of a transparent bladder. In consequence of undue irritation, the testicle may grow larger, become indurated, form into cysts; the exuded fluid may coagulate, become turbid by the admixture of blood or pus globules; adhesions may form, &c. All these are circumstances by which the original nature of the disease may become deeply concealed. The exudated fluid

consists chiefly of a colorless, clear or yellowish fluid, which, however, now and then becomes turbid by admixture of pigment blood, fibrine, fat, mucus, epithelium and semen, so that it assumes different colors, greenish, dark green, brown and even black.

The presence of semen is a remarkable phenomenon, the solution of which has been found only by the latest researches of Luschka, on the appendices of the testicles. According to Luschka, there is, under the head of the epididymis, a roundish vesicle of the size of a pea, which stands in immediate connection with the seminiferous tubuli of the epididymis. It therefore almost always contains seminal fluid. The vesicle or cyst now seems, under certain circumstances, to enlarge to such a degree that it forms an encysted, spermatic hydrocele; or it bursts, and diffuses its seminal fluid into the already-existing collection of serous fluid.

In an ordinary hydrocele, the testicle always lies in the upper and posterior part of the scrotum; whilst the lower cavity of the scrotum is filled with the respective fluid. In exceptional cases, however, a previous inflammation may have caused adhesion between the testicles and the lower part of the scrotum; then, of course, the testicle is fastened down and the collection of fluids gathers above it. It is well to bear this in mind. The diagnosis rests on these points which I have been detailing. In external appearance it resembles the most a *scrotal hernia;* but is easily distinguished from it, if we compare the history of both; the neck of the hernia, which is traceable into the abdominal ring; the symptoms of strangulated hernia, &c.; so that hesitation between the two is scarcely possible.

Those hydroceles which are dependent upon a general hydræmic state of the blood must be treated with reference to this whole general state and its symptoms. Hydrocele, in consequence of a blow, require Arn., Puls.

Those of unknown causes, Aurum, Graphites, Iod., Psorin., Rhodod., Silic.

Orchitis, *Inflammation of the Testicles.*

Pathologically speaking, the inflammation may attack the testicle itself, or the epididymis, or their lining, the tunica vaginalis.

It may be caused either by external violence or by an extension of inflammatory processes of related organs, such as the prostata, the neck of the bladder, the urethra, or, what is most frequently the case, by syphilis, of which I have spoke before. There is also an orchitis caused by a metastasis in parotitis or mumps.

The product of inflammation is either, 1. *A serous exudation*, especially in epididymitiitis and vaginalitis, and it is the same thing with the above-described acute serous hydrocele; or, 2. *A fibrous, plastic exudation*, which causes infiltration, swelling, and induration of the epididymis; or, 3. *A serous hemorrhagic exudation* in acute specific inflammations; or, 4. *A purulent exudation*, which takes place in the parenchyma of the testicle itself.

The plastic exudation generally gives rise to chronic enlargements of the epididymis; which may reach a considerable size and hardness.

The purulent exudation may be reabsorbed, or may form abscesses, which gradually break through the scrotum. Such abscesses heal only very slowly, usually forming fistulous openings.

A genuine orchitis very much resembles an incarcerated scrotal hernia. The pain is very acute, running along the spermatic cord, causing colicky pains and vomiting. We have in such cases to ascertain where the swelling commenced. In orchitis it grows from below upwards; in a hernia it comes from above down.

Therapeutic Hints.

Inflammation in general: Acon., Arn., Aur., Bell., China, Clem., Euphr., Merc., Nux v., Puls., Rhod., Rhus., Staph., Spongia, Zinc.; *from bruises:* Arn., Baryt., Puls., Zinc.; *from taking cold:* Clem., Puls., Rhus t.; *from gonorrhœa*: Cann., Clem., Merc., Puls.; *looking bright-red:* Bell; *dark-red:* Rhus t., Euphorb.; *chronic hardening and swellings:* Aur., Baryta, Bell., Clem., Con., Iod., Lyc., Silic., Sulphur.

Carcinoma Testis.

The most frequent form is the *medullary cancer*, which generally attacks young persons, even children. The fibrous cancer, or *scirrhous testis*, is found more in old age.

Cancer usually attacks but one testicle. Its causes are not known. Bell.? Carb. an.? Con.?

Varicocele, Cirsocele.

This consists of a varicose enlargement of the veins of the spermatic cord, and gives rise to a knotty swelling, which feels between the fingers like a convolution of earth-worms. It gets smaller in a horizontal position, and enlarges again when standing upright. It is almost always formed on the left side; its exciting causes are unknown.

it has no connection with varicose swellings of other parts; for example, on the legs, in the rectum, &c. In some cases it causes no inconvenience; in others it is very troublesome, causing a drawing, dragging sensation, extending from the loins into the limb, especially when walking or standing, and in hot weather; weakness; prostration; paleness, and great dejection of spirits.

Fluoric ac., Collinsonia, surgical operations.

Diseases of the Prostata.

Prostatitis, *Inflammation of the Prostate Gland.*

Primarily it is of rare occurrence, but is occasionally brought on by traumatic causes, as a blow, riding on horseback upon a hard saddle, or by sudden suppression of perspiration, excesses in venere, masturbation.

Secondary forms are much more frequent, and are then an extension of inflammatory processes from neighboring organs; for example, urethritis, stone in the bladder; gout; rheumatism. Its most frequent cause, however, is gonorrhœa, and the abuse of irritating medicines, like cubebs, balsam copaiva, turpentine, &c.

Symptoms.

Pain in the region of the neck of the bladder; heat, pressure, throbbing in the perinæum and rectum; frequent stitches from the perinæum into the pubic and lumbar regions and down into the limbs. Constant desire to urinate, with annoying, sharp pains around the corona glandis; the urine, after long straining, flows slowly, drop after drop, a quantity remaining still in the bladder, and, therefore, micturition is never attended with a feeling of entire relief. Severe cases cause perfect retention of urine. The discharges from the bowels are likewise painful and difficult, especially hard stools, on account of the swollen and inflamed gland pressing upon the rectum, where it may easily be detected by the introduction of a finger per anum.

In favorable cases prostatitis ends in resolution. Badly-managed cases suppurate and form abscesses, which perforate, either into the rectum, bladder, or urethra, and discharge accordingly. Still other cases assume a more chronic form, and, in consequence of exudation, infiltration and deposition of tubercles and cysts of calcareous substances, produce a permanent

Enlargement and Tumors of the Prostata.

The gland may, in this way, become in whole or in part hypertrophied. *A total hypertrophy* may reach the size of a fist or more, whilst the normal gland is not larger than a chestnut; it may be so uniform that the normal shape of the gland remains unaltered, or it may become quite considerably deformed. *Partial hypertrophy* alters in size and shape only single lobes of the gland.

As the prostate gland surrounds the urethra, reaching, with its base, over the neck of the bladder, and with its anterior extremity to the pars membranacea of the urethra, it is obvious that an increase of its size or an alteration of its form must likewise modify the mechanical proportions and relations of the prostatic portion of the urethra, of the neck of the bladder and the ejaculatory ducts. For example, an uniform enlargement of the gland necessarily pushes the bladder further back and upwards, elongating, in this way, the involved part of the urethra quite considerably, which explains the fact, that in old people sometimes the neck of the bladder can scarcely be reached by the longest catheters.

The enlargement of a lateral lobe, or an irregular enlargement of both lateral lobes, causes irregularities in the direction of the enclosed part of the urethra, compressing it more or less here and there, thus forming a kind of zig-zag passage. Or the posterior part of the enlarged lobe presses into the bladder, and from without shuts thus the neck of the bladder inside, or gives it an oblique direction.

The enlargement of the middle lobe or isthmus, which is the deformity most frequently found in old age, is capable of closing the neck of the bladder partially or entirely, thus preventing the passage of urine in part or entirely.

Symptoms.

An examination per anum reveals the swollen gland, and, on introducing a catheter into the urethra, we find more or less obstruction in its prostatic portion. There is difficulty in urinating, and, in a stooping posture, even retention of urine; dribbling of urine, and frequent discharge of prostatic fluid during stool. The form of alvine discharges is often flat or irregular, instead of being cylindrical. Old age is particularly subject to chronic enlargement of this gland.

Therapeutic Hints, according to Lippe.

Pulsatilla, *inflammatory origin*, painfulness in the region of the bladder; frequent desire to urinate; *dull stitch in the region of the*

neck of the bladder; after micturition spasmodic pains in the bladder, extending to the pelvis and thighs; feces flat, of small size.

Thuya, *syphilitic origin, especially suppressed,* or badly-treated gonorrhœa; stitches in the urethra from behind; also from the rectum into the bladder.

Digitalis, fruitless effort to urinate, or discharge of only a few drops of urine, and continued fulness after micturition; throbbing pain in the region of the neck of the bladder during the straining efforts to pass the water; increased desire to urinate after a few drops have passed, causing the patient to walk about in great distress, although motion increases the desire to urinate. Frequent desire to evacuate the bowels at the same time; very small, soft stools are passed without relief.

Cyclamen, in and near the anus and in the perinæum, drawing, pressing pain, as from subcutaneous ulceration of a small spot, while walking or sitting.

Selenium, while sitting, and also while walking, a drop of viscid, transparent fluid presses out of the urethra, occasioning a peculiarly disagreeable sensation; the same sensation is experienced shortly before and after stool.

Causticum, pulsations in the perinæum; after a few drops have passed, pain in the urethra, bladder, and spasms in the rectum and renewed desire.

Lycop., pressing in the perinæum, near the anus, during and after micturition; stitches in the neck of the bladder and anus at the same time.

Copaiva balsam, urine is emitted by drops.

Apis mellifica, frequent desire and pressing down in the region of the sphincter.

Discharge of prostatic fluid during a stool: Agnus cast., Alum, Anac., Calc. c., Carbo veg., Con., Corall., Hepar, Ignatia, Natr. c., Sep., Silic., Staph., Sulph., Zinc.

Fulness in the perinæum: Alum, Berb., Bry., Cycl., Nux v.

Sensation of heaviness in the perinæum: Copaiva, Graph.

Pulsation in the perinæum: Caust.

Continued desire to urinate: Amm. c. and m., Anac., Apis, Asar., Aur., Bell., Canth., Colch., Cop., Dig., Guaj., Ign., Iod., Merc., Millef., Mur. ac., Phos., Puls., Sepia, Scilla, Sulph., Sulph. ac., Thuya.

Impossibility to urinate: Dig., Sepia.

The desire to urinate continues after micturition: Bar. c., Bov., Bry., Calc. c., Caust., Carb. an., Croton tigl., Digit., Guaj., Lach., Merc., Natr. c., Ruta, Sabina, Staph., Thuya, Viol. tri., Zinc.

While urinating, burning in the region of the neck of the bladder: Cham., Nux vom., Petr., Sulphur.

The stream of urine is small: Graph., Olean., Nitr. ac., Sars., Spong., Staph., Sulphur, Tax., Zinc.

Difficulty in voiding urine—must press a long time before the urine flows: Alum, Apis, Hep., Naph., Sec., Tax.

Escape of urine involuntarily, drop by drop: Arn., Bell., Mur. ac., Digit., Petr., Puls., Sep.

Diseases of the Vesiculæ Seminales.

The vesiculæ are two little, oblong bladders, sometimes divided into two or three branches, which lie on the posterior and inferior surface of the bladder, and consist of an external contractile and an internal or mucous membrane. They are receptacles of semen, whence the latter is ejaculated during sexual excitement. In consequence of their location near the bladder and their functional relation to the sexual organs, it frequently happens, that affections of the bladder, urethra, prostata, and testes are communicated to these seminal vesicles. They are, like all mucous membranes, prone to inflammation and consequent derangements. Their morbid secretions mix with the semen, which loses its healthy appearance and nature. A clear diagnosis of such affections is seldom possible during life; although bloody, yellow, involuntary emissions, attended with acute, cutting, and burning pains, may lead us to *suspect* the existence of inflammation in these vesicles.

Spermatorrhœa,

Which means an involuntary flow of semen, is altogether different from such catarrhal affections of the seminal vesicles, although it also may have its cause, at least in part, in some morbid affection of these vesicles. It is, however, more the consequence of a general disorder of the sexual system.

Amongst the causes of spermatorrhœa especially to be mentioned are: excess in venere, masturbation, and sexual excitement, even by imagination; irritation of the penis by diseases of that organ; itching eruptions on the penis, scrotum, perinæum, and anus; worms; habitual costiveness; syphilis, &c. Such continuous irritation at first stimulates the testicles to perform over-duty; it causes a hyperæmia, swelling, and excessive sensibility of the testes, spermatic cord, seminal vesicles, ejaculatory ducts, and the prostate gland. Reaction

soon follows with great exhaustion, atrophy, and paralytic state of the muscular apparatus of these organs. The seminal ejaculations, which, at first, are voluntarily induced, become oftener repeated, until they finally occur involuntarily. For a while, yet, these emissions issue during an erection of the penis; sometimes, during sleep, *nocturnal emissions*. Coitus is still possible, although the semen passes off too quickly, and the act is a fruitless one. After a time even these short erections cease, and the semen flows out of the lax, flabby penis involuntarily, induced by the slightest sexual excitement, a mere external pressure or friction, even during an evacuation of the bowels or bladder, and without any voluptuous sensation.

Such a constant drain from the system of its most vital fluid must, unavoidably, cause a complete exhaustion even of the strongest constitution. The semen, too, becomes altered, thin, containing less and less spermatozoa, and the urine always looks turbid and cloudy from the admixture of semen, and has a peculiar, insipid smell. Such an unfortunate individual loses his muscular and sexual powers, manly character, and intelligence; in short, he ceases to be a man.

Therapeutic Hints.—First rule, stop the cause.

For great irritability of the genital organs, Canth., Camph., Gelsem., Iris, Nux v., Sulph.

Want of irritability, China, Clematis, Con., Digit., Phos. ac.

After emission, pain in the head and back, between the shoulders, Calc. c.

After emission, burning pain in the back, icy-cold hands, Merc.

After emission, great weakness in the arms, and dark ring around the eyes, Staphis.

Bloody emissions, Merc., Cann., Ledum.

Pale face, sunken eyes, depression of spirits, heavy dragging gait, excitable sexual desire: **Gelsem.**, Iris, Phos.

Emission of semen during a stool: Phos. ac., Gelsem., Nuphar.

Great general weakness: Camphor, China, Hydrast.

In connection with hemorrhoids and constipation: Collinson.

Impotence, Want of Virile Power.

This is either a mere transient inability, or a total want of virile power. The first may have its cause in a weakened state of the sexual organs—compare spermatorrhœa—or in certain mental states: bashfulness; fear of not being able to succeed. There is either no

erection of the penis at the proper time, or it is unsufficient; or the penis relaxes in the midst of the sexual act; or the semen is discharged before the introduction of the penis can have been effected. Total impotence has its cause in a functional weakness of the genital organs; then erections do not take place at any time. In some cases we find the testicles small, atrophied, soft; the scrotum relaxed and hanging down; the penis shrivelled, cool, and very small. In other cases, however, no such objective signs are apparent, and the cause may lie in affections of the brain or spinal marrow. We find it complicated with diabetes; and in other cases we can ascertain no cause.

Therapeutic Hints.—Compare the preceding chapter, especially in regard to those transient forms: Agar., Agn. c., Baryta, Calad., Lycopod., Natr. mur., Nitr. ac., Selen.

Among the new remedies: Eupat. pur., Gelsem., Hamam., Helonias, Phytolacca, Stillingia.

Total impotence may call for **Lyc.**, &c.

FEMALE GENITAL ORGANS.

Ovaries.

Oophoritis, *Inflammation of the Ovaries.*

This affection has its seat either in the *Graafian follicles, parenchyma*, or the *peritoneal covering* of the ovary.

The *Graafian follicles* are enlarged and filled with bloody fluid, and their surfaces injected. If in the *parenchyma*, we find the areolar tissue of the ovary hyperæmic, œdematous and infiltrated, which terminates in suppuration only in rare cases, much oftener in hardening and shrivelling of the ovary. An inflammation of the *peritoneal covering* is either a primary affection, or a continuation of a parenchymatous inflammation. In both cases we find the ovary covered, as in all inflammations of serous membranes, with a fibrinous exudation, which may be the cause of subsequent adhesions between the ovaries and the Fallopian tubes, or the broad ligaments. Its causes are: either, taking cold; getting wet during menstruation; sexual intercourse during the period; onanism; or, secondarily, inflammatory processes of neighboring organs—the peritoneum, or the uterus. It is therefore most frequently found in serving girls, who are exposed to all kinds of rough influences, (scrubbing of pavements, washing, &c.,) in

prostitutes, and other lewd women. Girls who have once had an attack are liable to a repetition during their menstrual periods. After the cessation of menstruation, the disposition to it ceases likewise. It always attacks a single ovary.

Its *symptoms* are not at all marked, when the parenchyma alone is the seat of the disease. We meet with symptoms of partial peritonitis, however, if the serous covering becomes inflamed; violent, sharp colicky pains, vomiting, fever, &c.; and so also may the bursting of a Graafian follicle be attended with inflammatory symptoms. As the ovaries lie deep in the lesser pelvis, covered completely by the small intestines, pressure downwards, from above the symphysis pubis, will reach the sore spot only when the abdominal walls are greatly relaxed. It may be more easily reached by an exploration per anum. We may, however, diagnosticate an oophoritis pretty safely when the above-mentioned symptoms appear to have set in during menstruation, after an exposure to cold or wet, followed by a sudden cessation of the menstrual flow. Where the inflammation spreads over adjoining organs, we find it accompanied by painful urging to urinate and to evacuate the bowels; by utero-vaginal blennorrhœas, or a numbness in the lower extremity of the affected side.

An acute attack rarely lasts longer than eight days, generally subsiding within twelve to twenty-four hours. In unfavorable cases it becomes chronic, and may terminate in the formation of serous cysts, induration of the ovary, or in suppuration.

Therapeutic Hints.

Acon., headache, backache, colic, fever, great restlessness and tossing about; after exposure to cold winds, or a sudden fright during the monthly period, by which the flow ceases; painful urging to urinate and to evacuate the bowels.

Ant. cr., when menstruation has been checked by taking a bath; nausea and vomiting, white tongue; great thirst at night; alternate costiveness and diarrhœa.

Apis, right side; swelling, with stinging pains from sexual intercourse during the monthly period; numbness in the right side of the abdomen, extending into the thigh, or upwards to the ribs; scanty urine; retarded stool; cough, with soreness in the upper portion of the left chest.

Arsen., drawing, stitching pain from the region of the ovary into the thigh, which feels numb and lame, worse from motion, bending or sitting bent; burning pain in the back while lying quietly upon it;

the menses consist of a thin, whitish, badly-smelling discharge; pale, yellowish face; emaciation; febrile action; thirst, with drinking little at a time; restlessness.

Bell., hard swelling of the ovary, with stitching, throbbing pains; constant bearing down, as if every thing would issue out; fever, with perspiration; glistening eyes; red face and delirium; after child-birth.

Bryonia, stitching pain, worse from the slightest motion and contact; suppression of the menses, with bleeding of the nose, inclined to constipation.

Canth., stitches, arresting the breathing; or violent pinching pains, with bearing down towards the genitals; or great burning pain in the ovarian region; constant urging and straining to urinate, with painful discharge of but a few drops of urine, which sometimes is bloody; after suppressed gonorrhœa.

Coloc., cramp-like pain in the left ovarian region, as though the part were squeezed in a vice; colicky pain all over the abdomen, which causes the patient to bend double; pain in the left foot; worse before menstruation, which is more profuse.

Conium, chronic cases; induration; lancinating pains; pain in the mammæ before the menses, which are feeble; smarting, excoriating leucorrhœa; giddiness when turning in bed; intermitting flow of urine.

Hamamelis, after a blow, the ovary swollen, with a diffused agonizing soreness over the whole abdomen; menses irregular, very painful, with exacerbation of all the sufferings at the catamenial epoch; retention of urine.

Hepar, when suppuration takes place, indicated by frequent crawls.

Ignatia, disappointed love; constant running of thoughts in that direction; sighing, despondency; leucorrhœa, which passes off with labor-like pains.

Lachesis, left ovary; tensive, pressing pains and stitches; inability to lie on the right side on account of a sensation as if something were rolling over to that side; menses scanty, with labor-like pressure from the loins downward; swelling of the ovary; suppuration.

Merc., stitching, pressive pains in the lower region of the abdomen, left side; upper portion of the abdomen distended; stool, with great tenesmus; constant urging to urinate, with scanty emission of a thick, brown-red urine, causing burning in the urethra; perspiration without relief; great weakness and emaciation; nightly aggravation and restlessness; menses suppressed.

Nux v., after previous use of different allopathic drugs.

Platina, excessive sexual desire, from an incessant tickling within the genitals; painful pressing towards the genital organs, as if the menses would make their appearance; profuse or suppressed menses, with palpitation of the heart, headache, restlessness and weeping; haughtiness.

Pulsatilla, after getting the feet wet; suppression of the menses, with nausea, coldness of the body, chilliness and trembling of the feet; pressure on bladder and rectum; thirstlessness, weeping, meek disposition.

Zincum, boring pain, relieved by pressure and during the menstrual flow.

Compare Aurum, China, Clematis, Hedeoma, Jod., Ph. ac., Phytolacca, Podoph., Sabina, Sep., Staph., Thuya.

Hydrops Ovarii, *Ovarian Dropsy; Formation of Cysts in the Ovaries.*

Most of these cysts originate in a *degeneration of the Graafian follicles*, which become distended, in rare cases, even to the size of a child's head; containing a clear, yellowish, serous, or thick, limpid fluid. There may be one or several of such cysts.

The *multilocular tumors* consist in a new formation of multiple-cysts, growing out of the parenchyma of the ovaries. They sometimes attain an enormous size, and contain either a serous or jelly-like fluid, which is dark if mixed with blood.

The alveolar degeneration of the ovary destroys all the original structure of that organ; its whole substance becomes transformed into larger and smaller cavities, which are separated by a fine tissue. Some of these cavities attain the size of a fist, whilst others remain quite small. At first the organ retains its roundish shape; later, by the extension of some of these cavities, it becomes uneven. The contents of these cavities is mostly a yellowish, tough, honey-like substance, though the larger ones sometimes contain a thinner fluid. This degeneration is generally complicated with cancer of the ovaries.

There are yet cysts to be mentioned which, instead of a fluid, contain *hair, teeth*, and *bones;* their interior walls present a structure which is quite similar to that of the cutis, having an epidermis with sudorific and sebaceous glands, and sometimes a hairy growth. Such cysts are called *dermoid cysts;* they sometimes attain the size of a walnut, or even a fist.

Its symptoms, in the first stage, may be identical with those of an

oophoritis; but usually all such signs are wanting, and the cysts, as long as they remain small, give no inconvenience whatever. When attaining a certain size, however, they exercise a pressure upon the bladder and the rectum, causing difficulties in urination and defecation. When pressing upon the nerves, which run down on the posterior wall of the lesser pelvis, they cause pain in the small of the back, or pain and numbness in the lower extremities; and when pressing upon the veins in the pelvis, they cause œdematous or varicose swellings on the lower extremities. At the same time we observe, in some cases, a swelling of the mammæ and a darkening of the rings around the nipples; sympathetic vomiting and general malaise; thus simulating very closely the commencement of pregnancy. When the cysts grow further, they rise out of the pelvic cavity, and most generally the patient feels relieved of those symptoms which are caused by their pressure upon the pelvic organs; in some cases, however, all these symptoms continue, as the cysts or portions of them within the pelvic cavity still continue to exercise the same compression upon the pelvic organs.

Increasing still more, they gradually fill the abdominal cavity, press against the diaphragm and compress the abdominal organs; the natural consequences of which are: vomiting, shortness of breath, palpitation of the heart, bronchial catarrh, disturbed secretion of urine, deficient nutrition, and consequently anæmia and hydræmia, which ends in general marasmus.

Their growth is not a steady one; they are frequently observed to increase and decrease in size periodically; the first taking place generally before and the latter after menstruation. As frequently intervening symptoms may be mentioned those of peritonitis, which are the more severe the more rapidly the cysts grow. If a cyst bursts, either by its own excessive distention, or by external violence, its contents issue into the abdominal cavity and cause a general peritonitis; or it may, in consequence of previously-formed adhesions and inflammatory processes, find its way into another of the abdominal organs, and be thence discharged.

Physical Signs.

As long as it remains in the pelvis, it may be diagnosticated by an examination per vaginam or rectum, where it appears as a well-defined swelling, dislocating the uterus in this or another direction, according to its position. The less the swelling takes part in the motions of the uterus the more sure is its diagnosis.

When it ascends from the pelvis, it appears first as a painless, well-defined swelling over the horizontal ramus of the pelvic bones; later it rises still higher, inclining more towards the middle-line of the abdomen, and yielding, more or less, a sense of fluctuation; the distended abdomen appears arched and changes its form scarcely any during different positions of the body.

Percussion yields a complete, dull, flat sound, where the tumor touches inside the parietal walls; the percussion sound is dullest, therefore, where the swelling is most prominent, thus differing from ascites, which gives a full sound, where the distended abdominal walls appear highest; for underneath that position lie, in ascites, inflated intestines.

Therapeutic Hints.—Compare Oophoritis and Peritonitis.

Apis, sudden stitches, like bee-stings, in the tumor, or sharp, cutting pains, with scanty urine and constipation; bearing down, and pain in the small of the back, as if the menses would come on; numbness of the corresponding lower extremity; thirstlessness; pale skin; œdema; right side.

Arsen., burning pain; restlessness; anxiety; oppression; sinking of strength; great thirst, but little drinking at a time; dropsical swelling all over.

Calc. c., distention and hardness of the abdomen; pressure in the rectum, and bearing down in the womb; profuse and too early menses.

Canth., burning pain; great sensitiveness of the abdominal walls; constant, painful urging to urinate and defecate; tenesmus in the bladder and rectum; wretched, sickly appearance.

China, after great loss of fluids; general anasarca; meteorism.

Iodium, pressing, bearing down towards the genitals; constipation; acrid leucorrhœa, corroding the linen; dwindling and falling away of the mammæ; strumous constitution.

Lycop., painful, boring stitches in the left ovarian region; pressure on the rectum and bladder; pain in the sacral region, especially when rising from a seat; red, sandy sediment in the urine; ascites; varicose veins on the legs.

Where proper Homœopathic treatment should show no influence in staying the growth of such tumors, or improving the general health of the patient, such cases belong then to the field of operative surgery.

Uterus.

Leucorrhœa, *Catarrh of the Uterus.*

Always at the time of the catamenial period the mucous membrane of the uterus is found in such a hyperæmic state that its overfilled blood-vessels burst, and occasion what is called the menstrual flow; this normal hyperæmic state might be called the physiological catarrh of the uterus. It becomes morbid, pathological, when it occurs at a time when no ripe ovula are cast off. It is, therefore, clear that the *predisposition* to uterine catarrh lies between the time when menstruation begins until it ceases.

Exciting causes are, all such disorders as cause *a stagnation in the proper circulation of the blood,* as heart and lung diseases; chronic constipation, &c.; *direct irritations,* as sexual excesses, masturbation, pessaries, &c.; or a *general weakness of the system and general morbid conditions,* such as typhus, cholera, small-pox, and other infective diseases; chlorosis; scrofulosis; tuberculosis, &c.

Its *pathological* features are like those of any other catarrh: hyperæmia, swelling, dryness at first, and afterwards increased secretion of mucus. When becoming *chronic,* the mucous membrane thickens and becomes hypertrophied, and is sometimes studded with polypous excrescences; its color turns brownish or slate-colored; the secretion becomes more or less purulent; the follicles of the portio vaginalis swell on account of the closure of their excretory ducts; whilst their secretion inside is still going on; they form little round bodies of the size of a hemp-seed or larger, and are known under the name of *ovula Nabothi.* Furthermore, we find, if the process lasts long enough, diffuse *catarrhal erosions,* mostly on the posterior lip of the mouth of the womb; or *follicular ulcers,* which originate in the bursting and suppuration of the above-named ovula Nabothi; and also *granulating ulcers,* which differ from the rest by their exuberant granulations, which bleed easily.

Symptoms.—An acute attack is characterized by drawing pain in the small of the back and in the inguinal region, a feeling of fulness and heaviness in the pelvis, dysuria and tenesmus. External pressure upon the lower part of the abdomen is painful. There is more or less fever. After three or four days the patient observes a discharge from the genitals, which at first is transparent and sticky, staining the linen grayish; by-and-by it becomes opaque and more or less purulent. In the further course of eight or ten days the fever gradually subsides, and after that the discharge diminishes until it finally ceases.

In chronic cases, the commencement is not easily ascertained. The patients have had, long before they attach much importance to it, a discharge from the womb, which varies considerably in different cases. Still it is of the same nature as that above mentioned, staining the linen grayish, and making it stiff; sometimes, even, clots of a gelatinous mass issue forth. That is characteristic of a *uterine catarrh.* A purulent discharge is just as liable to have its source in the vagina; and if the discharge be corrosive, the presumption is that it originates there. In some cases, the os uteri closes, owing to the sticky discharge and the swollen state of the neck of the uterus; and, in consequence, a collection of large masses of mucus within the uterus takes place, which are finally expelled by labor-like contractions of the uterus—*uterine colic.* The longer the catarrh exists, the more it changes the mucous lining of this organ, and the greater, of course, must be its effect upon the monthly period. In some cases, the flow becomes very profuse; and in others, very scanty; and almost always it is attended with more or less pain. Conception is not necessarily prevented, if the catarrh does not extend to the tubes or causes them to be closed; but it has been observed that women suffering with chronic uterine catarrh are very prone to miscarry. A chronic uterine catarrh may be endured for a long time; but it finally betrays itself by paleness and an earthy color of the face, weakness and relaxation of the muscles, anæmia and hydræmia. The most frequent expressions of chronic uterine catarrh are hyperæsthesia, neuralgic and spasmodic complaints; all of which we find united under the popular expression of *hysteria.* The progress of the disease is always slow; and amongst its complications we find a chronic parenchymatous metritis, inflections of the uterus, and closure of the cervical canal of this organ.

In giving ***Therapeutic Hints,*** I shall unite both *uterine* as well as *vaginal catarrh.* Both are known under the popular name, *leucorrhœa* or *whites,* as the most prominent and sometimes the *only* symptom of the two.

Aesculus hip. Pain in the small of the back and hip, with a lame feeling; the pain extends from the abdomen to the small of the back, which makes it almost impossible to get up and to walk after sitting; constipation and piles.

Aletris farinosa, in cases of debility from protracted illness, loss of fluids, defective nutrition, &c.; great disposition to abortion.

Alumina, profuse, purulent, yellow, corroding discharge, worse before and after the menses.

Aralia racemosa, offensive discharge, with pressing-down pains in the uterus.

Ambra, discharge only at night; thick mucus with stitches in the vagina before the discharge; pieces of bluish, white mucus.

Amm. c., watery, burning discharge from the uterus; profuse, acrid leucorrhœa.

Amm. mur., leucorrhœa with distention of the abdomen, without accumulation of wind; discharge like the white of an egg, after previous pinching around the navel; brown, slimy, painless leucorrhœa, after every discharge of urine.

Arsen., discharge, dropping out while standing, and emitting flatulence; acrid, corroding.

Baptisia tinct., acrid, fetid discharges; ulceration of the os uteri and vagina; debilitated state of the system.

Bell., acute catarrh; pressing, as if all the contents of the abdomen would issue through the genitals, which is followed by a discharge of white mucus.

Bovista, after the catamenia; while walking, thick, slimy, tenacious mucus, like the white of an egg; also, yellow, green, acrid, corrosive.

Calc. c., milk-like discharge during micturition, or flowing only in spells profusely; too early and too profuse menstruation; paleness of the face; weak feeling in the chest, especially when talking; weakness in the knees; emaciation.

Carbo veg., discharge only in the morning, when rising; soreness and rawness in the pudendum.

Caulophyllum, profuse secretion of mucus in the vagina; yellowish spot on the forehead, commonly called "moth."

Caust., weakening leucorrhœa, with too scanty menses; discharge, particularly at night; yellow face.

China, leucorrhœa instead of the menses; painful pressing towards the groins and anus; bloody discharge, occasionally clots of black blood; or fetid, purulent matter, with itching and spasmodic contraction of the inner parts.

Cocculus, flesh-colored, watery discharge, instead of the menses, mixed with a purulent and ichorous liquid; on bending or squatting down, the fluid gushes out; distention of the abdomen and pain, as of a heavy stone; on sitting down, bending, treading, or any other motion, a pain, as of internal ulceration.

Collinsonia, leucorrhœa in connection with pruritus, obstinate constipation, and dysmenorrhœa.

Conium, white discharge, burning, smarting, excoriating; contrac-

tive, labor-like colic, from both sides of the abdomen; weakness and lameness in the small of the back and subsequent lassitude; old maids.

Ferrum, in chlorotic patients, thin, watery discharge, at first smarting and corroding; palpitation of the heart; earthy, yellowish face; painfulness of the vagina during an embrace; swellings and indurations in the vagina.

Gelsem., white discharge; feeling of fulness in the hypogastrium; aching across the sacrum.

Graphites, perfectly white discharge, very profuse, especially in the morning on rising from bed; weakness in the back and small of the back, when walking or sitting.

Hamamelis, especially in those profuse discharges which simulate a hemorrhage and constitute a drain on the system as severe as a bleeding.

Helonias has been recommended in cases of general atony, anæmia, and torpid condition of the system.

Hydrastis, tenacious discharge; erosions and superficial ulceration of the cervix uteri and vagina; great sinking and prostration at the epigastrium, with violent and continued palpitation of the heart.

Ignatia, violent crampy pressing in the region of the womb, resembling labor-pains, followed by a purulent, corrosive discharge; mild dispositions who bear sufferings, even outrages, without complaining.

Iodium, old leucorrhœa, most abundant at the time of the menses, rendering the thighs sore and corroding the linen; dwindling and falling away of the mammæ; goitre.

Kreosot., leucorrhœa before and after the menses, especially when standing and walking, not when lying or sitting; the yellow discharge is acrid and corroding, offensive, causing redness and itching in the vulva; menses too early, too profuse, and too long.

Lachesis, leucorrhœa before the menses, copious, smarting, slimy, stiffening and staining the linen greenish; the menses appear at the regular time, but are too short and too feeble.

Lycop., profuse discharge, not constantly but in starts, which are always preceded by a sharp cutting pain in the hypogastrium; pale face, with frequent flushes or circumscribed redness of the cheeks; discharge of wind from the vagina; jerking of the lower extremities.

Magn. mur., early in the morning after urinating and after stool.

Mercur., inflammation of the genitals; discharge of different nature, always worse at night.

Natr. mur., leucorrhœal discharge after contractive colic, pressing

downwards, early in the morning, at night, when walking; acrid pain in the genitals; cutting pain in the urethra after micturition; yellowness of the face; and especially after local applications of nitrate of silver.

Nitr. ac., mucus—which can be drawn out—flesh-colored, greenish, cherry-brown, fetid; after mercurial treatment.

Nux v., fetid discharge, tinging the linen yellow; after all sorts of allopathic nostrums.

Phos., in consequence of chlorosis; watery slime, especially during or instead of the menses; acrid, smarting, corrosive, drawing blisters.

Podoph., discharge of thick transparent mucus, attended with constipation and bearing down in the genitals; prolapsus uteri and ani.

Pulsat., burning discharge, thin and acrid, milky, thick and white, without pain; when lying, or before and during the menses, which are scanty; inclination to looseness of the bowels; chilliness; thirstlessness; peevishness; sadness.

Sepia, in the climacteric period; during pregnancy; during puberty, when there is a sense of pressure and bearing down in the pelvis, stinging pain in the ovarian region, frequent urging to urinate, and itching in the genital organs; the discharge is of a varied nature.

Silic., acrid, excoriating discharge; or milky, in paroxysms, with cutting in the umbilical region; frequently, also, discharge during micturition.

Sulphur, discharges of all sorts, mild and excoriating; in most chronic cases, just as in all other chronic catarrhal affections; burning of the soles of the feet, and heat in the crown of the head; too much animal heat; feeling of faintness, with strong craving for nourishment, about eleven o'clock every forenoon.

Parenchymatous Metritis, *Acute and Chronic Infarct of the Womb.*

The substance of the womb itself is hyperæmic, œdematous, and consequently enlarged. It appears, on account of its congested state, of a more or less dark-red color, and sometimes contains exudates of blood. When it becomes *chronic*, this redness gradually disappears, as by the exuberant growth of the interstitial tissue the small blood-vessels become compressed, only some of the veins grow varicosed on account of the obstruction in the circulation; the substance itself appears pale, dry and tense, and greatly enlarged in thickness. This state of things, whether acute or chronic, is always more or less com-

plicated with inflammation of the mucous lining inside of the organ, (uterine catarrh,) or an inflammation of its peritoneal covering, (puerperal peritonitis.)

Its *causes* are the same as have been detailed in the chapter on Uterine Catarrh; to which I shall only add, that in a number of cases the starting point is delivery, puerperal metritis, and the shameful crime of producing abortion.

Symptoms.—It sets in, more frequently than uterine catarrh, with a chill, followed by fever-heat; there is pain in the small of the back and inguinal regions; pressure in the pelvis; great soreness and sensitiveness of the abdomen; dysuria and tenesmus; the same symptoms, only in a higher degree, than in uterine catarrh. The menses suddenly cease flowing, when it develops itself during the monthly period, or they do not appear at all, or they burst forth, in some cases, as a violent metrorrhagia,—metritis hemorrhagica. Being almost always complicated with uterine catarrh, it must, of course, produce similar characteristic discharges from the womb.

In the most favorable cases the disease runs from eight to fourteen days.

Much more serious are cases of PUERPERAL METRITIS. Its most frequent *causes* are: operative manipulations during parturition; or great mental excitements or depressions during the puerperal state; also a faulty diet, taking cold, &c., during that period. It is often complicated with puerperal fever; a dissolution of the blood, similar to that of typhus. The disease always commences in the first days after confinement, before the uterus has yet regained its normal position and size. It is characterized by chills, high fever, great tenderness of the abdomen, burning thirst, vomiting, suppression of lochial discharge, and a tendency to putrescence. A frequent complication is *phlegmasia alba dolens*, or *milk-leg;* which is a metastatic inflammation of one or several large veins of the thigh, causing a white, shining, very painful swelling of the whole leg.

CHRONIC INFARCTS of the womb show no such acute features; their most characteristic symptom is *a bearing-down feeling.* In the commencement, the menses generally flow long and profusely; later, however, when the exuberant interstitial tissue compresses the blood-vessels of the organ, they become scanty and often cease altogether for months and years. Otherwise we have the same symptoms as in chronic uterine catarrh, which is always attending it. Conception is not necessarily prevented; and pregnancy often proves a curative agent.

Therapeutic Hints.—Compare Uterine Catarrh and Peritonitis.

Aconite, high fever; dry skin; intense thirst; great restlessness; fear of death, and predicting the hour of death.

Arnica, when induced by external violence.

Arsen., burning pain; indescribable anguish and restlessness; sudden sinking of strength; burning thirst, drinks often, but little at a time; burning in the veins; aggravation about midnight; puerperal metritis; signs of dissolution of the blood.

Bellad., violent pains by spells; clutching pains, as if something with nails were clawing the intestines together; meteorism, without eructations; great sensitiveness and heat in the abdomen; painful bearing down in the pelvis towards the genitals and the rectum; with constant, ineffectual desire for stool; suppression of the lochial or menstrual discharge, or else vitiated, fetid discharge. Congestion of the head, with delirium, redness of face, and throbbing of the carotid arteries; drowsy dozing with startings, or drowsiness, with inability to go to sleep.

Bryonia, wants to lie perfectly still; the slightest motion causes pain; in the head splitting pain; in the bowels, limbs and body stitch-like pain; great dryness in the mouth, without thirst, or else great thirst, drinking tumbler after tumbler; perspiration in short spells, and only on single parts of the body; constipation.

Calc. c., fat persons, and those whose menses are too profuse and return too soon; they sweat easily about the head, and are troubled constantly with cold and damp feet. Chronic infarcts of the womb.

Canth., constant painful urging and tenesmus in the bladder; likewise, in worst cases, when the patients lie unconscious with their arms stretched out along the side of their body, interrupted by sudden starting up, screaming, throwing about the arms and even convulsions; all signs of erosions and ulceration of internal organs.

Cham., great agitation of the nervous system; she seems beside herself, with red face and heat all over; she is ill-humored, and can scarcely restrain herself to treat people with civility; sometimes one cheek red and the other pale; after fits of passion.

Coloc., colicky pains in the bowels, with deadly color of the face and bending double; worse after eating or drinking; partial heat, and partial coolness of the skin, with quick pulse, vomiting and diarrhœa; bitter taste in the mouth; after indignation.

Crotalus, milk leg.

Hyoc., typhoid state; either complete apathy, or else great excita-

bility, spasms, jerkings, delirium, wild staring; throwing off bed-clothes, making herself naked.

Kreosote, putrid state of the womb after child-birth; confounding ideas; loss of memory; thinks herself well; discharge of dark, offensive blood from the womb.

Lachesis, constantly lifting the bed-clothes from the abdomen, on account of an uneasy feeling caused by it; the pain in the uterus is relieved by a flow of blood for the time being, but returns soon afterwards; in bad cases, unconsciousness, livid face, repeated shaking chills; skin alternately burning hot and cool; abdomen distended; lochial discharge thin, ichorous; stool and urine suppressed.

Mercurius, inflammation of the genital organs and ulcers; moist, soft tongue, showing the imprints of the teeth, accompanied occasionally with great thirst; profuse sweat without relief; all worse at night.

Nux v., after taking cold, or using different sorts of drugs; in chronic cases, with bearing down into the vagina and towards the os sacrum; constant urging to urinate; constipation.

Phos., fair, graceful women; after frequent pregnancies; pyæmic state and inflammation of the veins.

Puls., after getting the feet wet; frequent chilliness; thirstlessness; deficiency of milk; suppression of the lochial discharge; mild, tearful disposition.

Rhus t., constant restless moving; can't lie still; dry tongue, with red tip; red rash on the breast; powerlessness of the lower limbs; the lochial discharge turns bloody again; typhoid symptoms.

Sabina, in metritis hemorrhagica.

Secale, putrescence of the uterus; abdomen distended, not very painful; discharge from the vagina, brownish, offensive; ulcers on the external genitals discolored and rapidly spreading; burning hot fever, interrupted by shaking chills; small, sometimes intermitting pulse; great anguish, pain in the pit of the stomach, vomiting of decomposed matter; offensive diarrhœa; suppressed secretion of urine; the skin is covered with petechial and miliary eruptions, or shows discolored, inflamed places, with a tendency to mortification; the patient lies either in quiet delirium, or grows wild with great anxiety and a constant desire to get out of bed.

Veratrum alb., if commencing with violent fits of vomiting and diarrhœa; hot body; cold extremities and deadly pale face, covered with cold perspiration; delirium and great anxiety; suppressed lochial discharge; nymphomania.

Hydrometra, Hæmometra, *Partial or Total Closure of the Womb.*

In consequence of the just considered inflammatory processes, it happens now and then that exuberant granulations of the mucous lining or cicatrization of ulcers form adhesions within the neck of the uterus and thus cause a partial or total closure of its mouth. The same result may be produced by pseudo-formations within the womb, or certain flexions of the cervix uteri. In such cases it is obvious that any secretion within this organ can either not escape at all, or only with great difficulty, and under certain favorable circumstances. The secretion collects and distends the uterus sometimes to a very considerable size. This distention causes the mucous lining to grow thin, and its glandular structure, which naturally secretes mucus, to disappear; it now approaches the nature of a serous membrane, and secretes a serous fluid instead of mucus. Thus originates *Hydrometra*, or *dropsy of the womb*.

Hæmometra it is called, when *blood*, instead of serum, collects in the womb, in consequence of a partial or total closure of its mouth. This takes place in women who still menstruate; or the occlusion is a congenital imperforation of the organ. In the first instance it is always attended with contractions of the womb, labor-like pains, or uterine colic at the period of menstruation, which may succeed in cases of a partial closure, to press the collected fluid out in gushes; in the latter case the menstrual discharge does not take place at all. The existing trouble may be suspected when repeated menstrual periods pass by without any flow, although the patient feels all the symptoms of it: periodical colicky contractions; bearing-down sensation; and all the rest of the symptoms of amenorrhœa and dysmenorrhœa. The abdomen commences to enlarge above the os pubis. Only by a physical examination can we discover the occult complaint.

Therapeutic Hints.—It is clear that, if Homœopathic treatment of those inflammatory processes could not prevent adhesions and closure, medicines will not be likely to unclose them. Such cases require surgical treatment.

Displacements of the Womb.

As the uterus is quite movable, it may be displaced in all directions. The principal displacements, however, are:

ANTEVERSION, that form in which the fundus of the womb inclines

towards the front, leaning upon the bladder and pubis. It may be caused by an hypertrophy of its anterior wall; by peritoneal exudates or tumors within the abdominal cavity, pressing it forward, or by accidental external injuries or muscular efforts. It causes no particular symptoms other than those of pressure upon the bladder and rectum. An examination per vaginam reveals the portio vaginalis inclined backwards towards the os sacrum.

RETROVERSION, in which the fundus of the womb inclines backwards towards the os sacrum, or is even pressed down beneath its promontory. It is found in the early stages of pregnancy; and may be caused, like anteversion, by the same abdominal conditions. Its symptoms consist in a pressure upon the bladder and rectum.

PROLAPSUS, or FALLING OF THE WOMB. It consists in a descent of the womb in different degrees; from a mere relaxation or bearing down upon the upper portion of the vagina, to an actual protrusion of the womb out of the vagina, *prolapsus completus*, or *procidentia uteri*.

As the womb is kept in its natural position by the peritoneum and the broad ligaments, (which, in fact, are but processes of the peritoneum itself.) it is evident that a descent of that organ can take place only in proportion as there exists relaxation of this apparatus. The causes for such relaxation may be undue pressure from above; straining; lifting, &c.; but in a majority of cases we shall find it dependent upon its own inherent weakness from disease, which makes it at once amenable to medical treatment.

Its most prominent *symptoms* are: a sense of weight or bearing down in the pelvis, as if every thing would issue from the vagina, worse in walking, standing, and after exertion; pressure upon the bladder and rectum, causing a constant desire to urinate and defecate, often with an inability to accomplish any thing; more or less leucorrhœa. The fact of real prolapsus is readily ascertained by a manual examination.

Therapeutic Hints.—Compare Leucorrhœa.

Ammon. mur., pain as from a sprain in the groin, obliging one to walk crooked; menses appear too soon, with pain in the belly and small of the back; they flow more abundantly in the night; discharge of a quantity of blood with the stool during the catamenia.

Arnica, after a bruise or concussion, which leaves a bruised and sore feeling in the lower part of the abdomen, so that she cannot walk erect.

Argent., pain in the small of the back, which extends towards the front and downwards.

Aurum, after lifting a heavy load, a sense of weight in the pelvis, with ischuria and constipation, worse at each menstrual period; great dejection of spirits; longing for death, increasing to a desire for self-destruction; or vehement, the least contradiction excites her wrath.

Bellad., pressing early in the morning, as if all the contents of the abdomen would issue through the genital organs; drawing pain in the small of the back downwards; flow of blood between the periods; great dryness of the vagina; frequent, unsuccessful desire to urinate or to evacuate the bowels; only a few drops of urine are discharged from the bladder, and some mucus from the rectum; dizziness; roaring in the ears; congestion to the head.

Calc. c., pressing on the uterus; aching of the vagina; stinging in the os uteri; the menses appear too soon, and are too profuse; milk-like leucorrhœa; inclination to perspire easily about the head; great liability to strain a part by lifting; easily tired by bodily exertions; in walking up stairs she feels dizzy and entirely exhausted; even talking makes her weak; great susceptibility to catch cold; the feet feel most of the time damp and cold, or else the soles of the feet are burning hot; great desire for hard-boiled eggs; big-belliedness; scrofulous diathesis.

Calc. phos., every cold causes pains in the joints, and in other places where the bones unite and form a symphysis or suture.

Cham., abortus; colicky pain and bearing down, with frequent desire to urinate; frequent discharge of coagulated blood, with tearing pains in the veins of the legs, and violent labor-pains in the uterus; she is inclined to be quarrelsome and angry; can hardly stop talking about old vexatious things.

China, general weakness in consequence of loss of vital fluids, either by hemorrhages, profuse diarrhœa, or debilitating illness; great disposition to sweat during motion and sleep; feels worse from exposure to the slightest current of air; all pains are worse from slightest touch.

Conium, pain in the mammæ before the menses; pressure from above downwards, and drawing in the legs during the menses; feeble or suppressed menses; sterility; smarting, excoriating leucorrhœa; cough during pregnancy; cough worse at night, and when lying down; vertigo, worse when lying down, or looking round, or going down stairs; indurations in the mammæ or other glands.

Ferrum jod., retroversion and consequent pressure upon the rec-

tum, that she can neither stand nor walk; constant tenesmus, with frequent white slimy stools; scanty, deep-colored urine; nervous and hysteric spasms; scrofulous diathesis.

Ignatia, violent crampy pressing in the region of the uterus, resembling labor-pains, followed by a purulent, corrosive leucorrhœa; the menses are scanty, black, and of a putrid odor; she seeks to be alone, is brooding to herself, and full of grief; all her pains are aggravated by drinking coffee or smelling tobacco smoke.

Kali c., pain in the small of the back, as though it were pressed in from both sides, with labor-like colic and leucorrhœa; also during the menses; the pains in the bowels are apt to recur about three o'clock every morning; bloated face in the morning, especially between the eyebrows and upper lids; great dryness and itchiness of the skin; great tendency to start when being slightly touched.

Lachesis, just as patients with a lachesis-sore-throat cannot bear any thing touching their neck, so do women afflicted with womb diseases constantly pull their dress from off the abdomen; violent labor-like pressing from the loins downwards during the menses, which are scanty; palpitation of the heart, with numbness in the left arm; constant feeling of something in the throat which she cannot swallow down; feeling of a ball rolling in the bladder or abdomen, or in both places; climacteric period.

Lycop., chronic dryness of the vagina; pressing through the vagina on stooping; chronic suppression of the menses after fright; incarcerated flatulence; varicose veins on the lower extremities; jerking and twitching of single limbs or of the whole body, sleeping or waking; always wakes up very cross.

Merc., peculiar, weak feeling in the abdomen, as though she had to keep it up; close above the genital organs a sensation as if something heavy were pulling downward, accompanied by a pulling pain in both thighs, as if the muscles and tendons were too short. During the menses red tongue, with dark spots and burning; salt taste in the mouth; sickly color of the gums, and the teeth are set on edge; great tendency to perspire; all the symptoms worse at night; inexpressible feeling of some internal, insupportable illness.

Natr. mur., pressing and pushing from the side of the abdomen towards the genital organs early in the morning; she has to sit down to prevent a prolapsus uteri; dryness of the vagina and painful embrace; burning and cutting in the urethra after micturition; headache on waking every morning; faint, weak voice, and exhaustion

from talking; after the abuse of quinine or the local application of nitrate of silver.

Nitr. ac., violent pressing in the hypogastrium, as if every thing were coming out at the pudendum, with pain in the small of the back through the hips and down the thighs; she feels so weak that she loses breath and speech. Inclined to looseness of the bowels; most violent, cutting pain after an evacuation, lasting for hours; she feels, on the whole, better, when riding in a carriage.

Nux vom., prolapsus after straining by lifting, or after miscarriage; constant, painful pressing and burning in the uterine region; pressive pain in the small of the back, worse when turning in bed; drawing in the thighs; constant, unsuccessful urging to stool and constant desire to urinate; the patient wakes after midnight and lays awake for hours, then falls into a heavy sleep again, constantly dreaming until late in the morning, when she feels disinclined to rise. Always the first remedy after allopathic drugging.

Platina, great heaviness, pressing in the genitals, extending through the groins as far as the small of the back; profuse menses; great sensitiveness of the parts, with pressing from above down; internal chilliness and external coldness; constipation; feeling of numbness and rigidity here and there; also with trembling and palpitation of the heart; haughty disposition.

Podoph., great costiveness; frequent micturition; weakness and soreness of the back, especially after washing; prolapsus ani.

Pulsat., chilliness and paleness of face; bad taste in the morning and dry tongue without thirst; is easily moved to tears.

Rhus tox., after a strain or hard labor; she feels worse after any long walk; the pain in the small of the back is relieved by lying on a hard couch.

Sepia, pressing in the uterus, oppressing the breathing, from above downwards, as if every thing would come out of the vagina, accompanied with colic; she had to cross her limbs to prevent it; followed by a discharge of jelly-like leucorrhœa; slow and difficult evacuation from the bowels, although the excrements are soft; pot-belliedness; yellow saddle across the bridge of the nose.

Sulphur, weak feeling in the genital organs and pressure on the parts; troublesome itching of the pudendum, with pimples all around and burning in the vagina; she was scarcely able to sit still; the menstrual blood is thick, black, and so acrid that it makes the thighs sore; burning and smarting leucorrhœa; sudden, imperative urging to urinate to prevent an involuntary flow; restless and sleepless

nights; congestion of the head with cold feet; always feels too hot, especially her feet, which compels her to put them from under the cover; walks bent forwards; all the symptoms worse while standing; psoric diathesis.

Uterine Polypi.

They are such as grow on a pedicle or stem from under the mucous lining into the cavity of the womb, or from under the serous lining into the cavity of the abdomen; or they lie embedded in the parenchyma of the uterus without pedicles—*interstitial fibroids.*

They seldom appear before the thirtieth year of age, and their presence cannot be suspected until the woman complains of a return of her menses every fourteen days, lasting longer and being more profuse than usual. A sure diagnosis can be reached only by a physical examination.

The *mucous polypi* consist of an exuberant growth of the uterine mucous lining; they are usually pediculated; are either very vascular, or consist of distended mucous follicles. They are found chiefly near the orificium uteri, and often emerge from it. They cause violent hemorrhages and leucorrhœa.

Therapeutic Hints.—As most important remedies compare Calc. c., Calc. phos., Lycop., Phos., Sanguin., Silic., Staphis., Teucrium, Thuya.

Cancer of the Womb.

In most cases it is of the medullary kind; scirrhous and alveolar cancers are of less frequent occurrence. The degeneration almost always begins at the vaginal portion, rarely extends to the fundus, is, however, very apt to spread down the vagina, over to the bladder and rectum, causing, at the period of its decay, the most horrid destruction of these parts. Its most important symptoms are pains in the small of the back, loins, and groins, which grow more and more violent; hemorrhages, at first only during the menstrual periods, later at any time; and leucorrhœa, which becomes more and more watery, corroding, and offensive.

The CAULIFLOWER EXCRESCENCE is a cancroid hypertrophy of the papillæ in the mouth of the womb, which sometimes attains an enormous size in the shape of cauliflowers. It looks bright red, bleeds easily, and is prone to cancerous degeneration, in which state

it undermines the general constitution by pain and loss of blood, like cancer of the womb, to which it is similar in all its symptoms. A certain diagnosis can be gained only by an examination with the speculum.

Therapeutic Hints.

Arsen., great exhaustion; restlessness and fits of anguish, with terrible, sharp, burning pains; all worse about midnight; acrid, corroding, and burning discharges, watery, light, or dark-colored, often very offensive.

Aurum mur., stinging, cutting, pressive pains in the uterine region; very offensive discharges; belching up of wind; craves nothing but sour things.

Bellad., painful bearing down in the pelvis, as though every thing would fall out of the genitals; a similar pain in the small of the back; frequent, transient stitches in the region of the womb; hemorrhages from the womb, profuse, often very offensive.

Calc. c., burning soreness in the genital organs; aching in the vagina; profuse menstruation; flow of blood between the monthly periods; cold feeling on the top of the head; great sensitiveness to cold air and liability to catch cold; scrofulous diathesis.

Carbo an., burning in the abdomen, extending into the thighs; labor-like pain in the pelvis and small of the back, extending into the thighs, with discharge of slimy, discolored blood; irregular menses; uterus swollen and hard; cachectic appearance of the face; earthy color of the skin; great weakness.

Carbo veg., paroxysmal spells of burning in the uterine region; varicose veins on the external genital organs; cold knees in bed.

Conium, stitching pain in the womb, accompanied by such symptoms as accompany pregnancy: nausea and vomiting; craving sour or salt things; pain and swelling of the mammæ during the menses; dejection of spirits, &c.

Graphites, cauliflower excrescence; burning, stitching pains, like electric shocks, through the womb, extending into the thighs; great heaviness in the abdomen when standing, with increased pains and faintness; menses only every six weeks, with a discharge of black, clotted, offensive blood, and an increase of all the sufferings; constipation; earthy color of the face; frequent chilliness; sad, desponding.

Iodium, cutting in the abdomen, with pains in the loins and small of the back; uterine hemorrhage at every stool; indurations of the

uterus; painfulness and feeling of heaviness in both mammæ; they hang down, relaxed, and lose their fat; dwindling and falling away of the mammæ; the patient feels worse from external warmth; after the abuse of mercury.

Kreosote, cauliflower excrescence; awful burning as of red-hot coal in the pelvis, with discharge of clots of blood having a foul smell; bearing down and sense of weight in the pelvis; drawing pains in the small of the back and uterine region, extending to the thighs, intermingled with stitching pains; the vagina is swollen and burning hot; long-standing leucorrhœa, becoming more and more watery, acrid, bloody, and ichorous all the time; frequent hemorrhages from the womb; dwindling and falling away of the mammæ, with small, hard, painful lumps in them; wretched complexion; great debility; sleeplessness.

Lachesis, pain in the parts as if swollen, they do not bear contact, and have to be relieved of all pressure; coughing or sneezing causes stitching pains in the affected parts; tenacious and acrid menstrual flow with labor-like pains; discharge of a few drops of blood from the nose before the menses, which are scanty and delaying; especially indicated during the climacteric period *with* frequent uterine hemorrhages.

Lycopod., drawing in the groin; burning and gnawing; chronic dryness of the vagina; pressing through the vagina on stooping; discharge of wind through the vagina; pain in the small of the back, extending down to the feet; incarcerated flatulence, with rumbling in the left hypochondriac region; red, sandy sediment in the urine; jerking of single limbs awake or asleep; feels worse in general from four to eight o'clock P. M.

Magn. mur., scirrhous induration of the womb; uterine spasms extending to the thighs and occasioning leucorrhœa; discharge of black clots of menstrual blood, more when sitting than when walking; large, hard, difficult stools which crumble off as they are expelled.

Nitr. ac., irregular menstruation in shorter or longer intervals; during the intervals a profuse, discolored, brownish, and offensive leucorrhœa; great debility, nervousness, and depression of spirits; hemorrhoidal tendency; great pain in the rectum after stools, lasting for hours, even worse after a diarrhœic evacuation; the urine is very offensive. During a ride in the carriage they feel much better.

Natr. c., induration of the neck of the womb: the os uteri is out of shape; pressing in the hypogastrium towards the genital organs, as if every thing would come out; metrorrhagia; putrid leucorrhœa; head-

ache in the sun and from mental labor; she gets nervous from playing on the piano, and feels great anxiety during a thunder-storm.

Sepia, induratio colli uteri or vaginæ; painful stiffness in the uterus; pressing from above downwards, oppressing the breathing; must cross her thighs, in order to get relief; pot-belliedness; yellow saddle across the bridge of the nose; feels worse while riding in a carriage.

Silic., she feels nauseated during an embrace; diarrhœa or else great costiveness before the menses; increased menses, with repeated paroxysms of icy coldness over the whole body at the time of their appearance; indurations of the mammæ; most of the symptoms make their appearance about new moon.

Thuya, cauliflower excrescences.

Metrorrhagia, *Hemorrhage from the Womb.*

We understand by metrorrhagia a more or less profuse flow of blood from the womb at any other time than that of the menstrual period.

1. It may occur in the *not pregnant state of the womb,* in consequence of abnormal fluxion to that organ, or in consequence of morbid growths in the womb and desorganizations of the organ, as shown in the previous chapters, or (and that is, perhaps, its most frequent occurrence) in consequence of those conditions which lead to the so-called "change of life" in the female organism; here it is, perhaps, not always distinguishable from a mere profuse menstruation.

2. *It may occur during pregnancy.* With some women it is almost a rule, that the menstrual period is repeated several times after conception, without apparent injury to the child. In others, however, a hemorrhage during the first months of pregnancy is the forerunner of abortion. Hemorrhages during the second half of pregnancy are often signs of a placenta previa, or likewise forerunners of miscarriage.

3. It may occur *after the expulsion of the child,* whether it be full-grown or not. Such bleedings are generally of great importance. They are almost always (if not occasioned by mechanical injuries) the consequence of insufficient contractions of the womb, the causes of which consist either of protracted or exhausting labors, or a too rapid expulsion of the child, or a partially-adhering placenta, or large blood coagula within the womb.

4. When occurring later, *during the lying-in time,* the hemorrhages are usually not so profuse, and happen chiefly in women who do not nurse the child. Sometimes, however, they may be caused by an inflammatory irritation of the womb.

Symptoms.

Metrorrhagia sets in frequently with chilly spells. The bleeding is either in gushes, or a continuous flow of bright-red or dark blood. The face turns pale, the extremities grow cold; there is anxiety, restlessness, labor-like pains or colic; sometimes difficulty in breathing; vomiting and even convulsions. A great loss of blood brings on the signs of anæmia: coldness and deadly paleness of the face; chills; cold perspiration; darkness before the eyes; ringing in the ears; fainting, drowsiness, weak pulse, convulsions.

Therapeutic Hints.

Apocyn. cann., the flow is either continuous or paroxysmal; the blood fluid or clotted; there is nausea, vomiting, palpitation of the heart, great prostration and fainting when raising the head from the pillow.

Arnica, after difficult labor or external injuries; head hot; remaining body cool.

Bell., great bearing down, as if every thing would be pressed out, or a pain from the sacrum through the pelvis to the pubis; headache; loss of consciousness; darkness before the eyes; enlarged pupils; cold nose; oppression, groaning, yawning, jerkings of the arms; convulsive clenching of the thumbs.

Calc. c., climacteric period; chronic; mixed with leucorrhœa; previously always inclined to profuse and protracted menses.

Caulophyllum, threatening abortion, and with spasmodic bearing-down pains; great vascular excitement; passive hemorrhage after abortus or confinement; tremulous weakness of the whole system.

China, at the commencement or actual presence of the above described symptoms of anæmia.

Cham., threatened abortus or actual abortion; labor-like pains from the small of the back extending to the genitals; blood dark and clotted.

Crocus, dark, viscid, stringy blood, in black clots; feeling as if something alive were in the abdomen; nervous excitement; palpitation of the heart; fearfulness; after being overheated, straining and lifting; after abortus and delivery; worse from slightest motion; yellowish, earthy color of the face.

Erigeron can., uterine hemorrhage, with violent irritation of the rectum and bladder; after abortion, with diarrhœa and dysuria.

Ferrum, partly fluid and partly black, clotted blood; labor-like and

colicky pains; fiery red face; frequent short shudderings; headache and dizziness; constipation and hot urine.

Hamamelis, passive hemorrhage, with anæmia.

Hyoc., continuous flow of bright-red blood, with spasmodic jerkings of the body and great vascular excitement.

Ignatia, after the abuse of chamomile-tea; after mental excitement and depression.

Ipec., especially after child-birth or the taking away of the placenta; the flow is continuous, and the patient *gasps for breath.*

Kreos., black blood in large quantities and of an offensive smell; during the climacteric period.

Kali c., threatened abortus and consequences of it; great weakness in the small of the back and lower extremities; pain in the small of the back as though it were broken; dry, hacking cough; obstinate sweating, with feverish chilliness; chronic inflammatory state of the womb, with nausea and vomiting.

Lachesis, climacteric period.

Lycop., partly black, clotted, partly bright-red blood, and partly bloody serum, with labor-like pain, followed by swooning; distention of the abdomen in different places, changing localities; pain in the small of the back, extending into the thighs; worse in the afternoon from four o'clock, commencing with chilliness; restless sleep; dreams of falling down from a height; especially for women who habitually menstruate profusely.

Merc., frequent fainting; profuse cold perspiration on the face; collection of slime in mouth and throat; external swelling of the genitals.

Nitr. ac., after miscarriage or confinement; diarrhœa, with cutting pain in the rectum after stool; urine of an intolerably strong smell.

Nux vom., during the climacteric period, and especially if such persons have been drugged previously by allopathic nostrums; or have used much coffee or alcoholic drinks, or too highly-seasoned food; if they lead a sedentary life; complain much of costiveness and headache; suffer with piles, &c.

Phosph., between the menses and during pregnancy; lame and bruised feeling in the small of the back; dry cough and tightness in the chest, worse before midnight; great heat on the top of the head; a great deal of vertigo; chronic looseness of the bowels, worse in the morning, or else chronic constipation, with dry, narrow stools.

Platina, during pregnancy; after confinement; after great mental emotions; dark, thick, not coagulated blood; pressing pain from the

small of the back downward upon the pelvic organs, as though they would come out, with great sensitiveness of the external organs, and nymphomania; sometimes a feeling as if limbs and body were growing larger.

Plumbum, during the climacteric period; dark clots, alternating with fluid blood or bloody serum, with a sensation of fulness in the pelvis, and slight bearing-down pains from the small of the back to the front; skin dry, pale, yellowish; here and there "liver-spots;" great debility, short breath on going up stairs; depressed spirits.

Poisoning with lead brings on abortion.

Pulsat., dark, coagulated blood emitted in paroxysms; worse in the evening, with labor-like pains; habitual looseness of the bowels; ordinarily rather scanty menses; yielding disposition.

Rhus tox., bright red blood; threatening abortus, induced by straining or lifting; trembling sensation in the middle of the chest; contractive pain around the hypochondria; drawing, tearing in the back, loins and hips; cramp-like contraction of the thighs; aching all over, worse during rest; heavy, unrefreshing sleep, full of dreams.

Sabina, blood bright red or dark, also in clots, sometimes alternating, now dark, coagulated, and then, again, thin and bright red; flows mostly in paroxysms, which are brought on by the slightest motion; drawing, cutting, pressing pains from the small of the back to the genitals and into the thighs; women who menstruate early and almost always profusely; gouty diathesis; when the patient feels better in cool and worse in warm temperatures; threatening abortus; after miscarriage and confinement.

Secale, atonic hemorrhages during the critical age; after confinement; dark, seldom coagulating blood, sometimes fetid; no pain, or only slight bearing-down; flooding, worse from the slightest motion; trembling, convulsive jerkings of the limbs; cramps in the calves of the legs; general coldness.

Sepia, climacteric age, or during pregnancy, especially during the fifth and seventh months; congestion of the head; fulness and pressure in the chest; spasmodic contractions in the abdomen, with terrible bearing-down; induration of the womb; varicose veins; yellow, sallow complexion. Such patients are very irritable, and faint from any little exertion.

Sulphur, in chronic cases, when other remedies do not prevent its return; psoric taint of the system; eruptions here and there, or previously-suppressed eruptions; looseness of the bowels early in the morning, or else great constipation; fits of gnawing hunger

before dinner; the patient complains of great heat, or flushes of heat; has sleepless nights, seemingly without cause, or on account of a tormenting itching all over the body; itching about the anus and genitals; chronic leucorrhœa, &c.

Menstrual Anomalies.

I. Menorrhagia

Is, like metrorrhagia, a profuse flow of blood from the womb; only with the difference, that it occurs *at the time of the menstrual period.* This period may keep regular time, or it may come too soon, or it may last too long; in some cases the menses are too profuse, too early, and lasting too long. Its causes are various. We may trace it to different structural changes and morbid growths of the uterus; to stagnation of the blood in the uterine veins, depending upon heart and lung diseases; to fluxions to the womb, brought on by sexual excesses, or sexual excitements by loose literature, or onanism; to hemorrhagic diathesis, as in scurvy, purpura hemorrhagica, hemorrhagic small-pox, measles, typhus, &c. Such cases, however, are of rare occurrence. The blood is either fluid or coagulated, and may differ greatly in color and character. Strong plethoric women may endure menorrhagia for a long time; weak, feeble women soon show signs of anæmia.

Therapeutic Hints.

Compare the preceding chapter on Metrorrhagia, and likewise those which treat of its causes as stated above.

Ammon. c., premature and very copious flow, especially at night, when sitting or riding, and after a ride in the cold air; with spasmodic pains in the belly and hard stools, with tenesmus; cholera-like symptoms at the commencement of the flow.

Arg. nitr., congestion of the uterus; cutting pains in the small of the back and groins; cramp in the stomach; great debility of the lower limbs; vertigo and enlarged feeling of the head.

Bryon., menses premature and too profuse; dark-red blood; tearing in the limbs; splitting headache from the least motion, even on moving the eyes; white-coated tongue; great thirst; bilious vomiting; tearing in the limbs; constipation; stools as if burnt; or diarrhœa in the morning.

Calc. c., profuse, too early, and lasting too long; anæmic symptoms and congestion of the head and chest; leucorrhœa afterwards; scrofulous diathesis.

Calc. phos., menses every two weeks, black and clotted; before their appearance, griping and rumbling in the bowels; leucorrhœa; stitching pains in the left side of the head; sleepiness during the day.

Cham., profuse discharge of dark, almost black coagulated blood, with drawing, clawing pains from the small of the back to the os pubis; greatly excited state of mind; fainting spells, cold extremities.

Cimicifuga, profuse and too early; dark, coagulated blood; aching in the limbs; severe pain in the back, down the thighs, and through the hips, with heavy pressing down; weeping mood; nervousness; hysteric spasms; great pain in the head and eyeballs, increased by the slightest movement of the head and eyeballs.

Cocc., profuse and too often; when rising upon the feet, it gushes out in a stream; paralytic feeling of the lower extremities.

Collinsonia, menorrhagia in connection with constipation and piles.

Crocus, profuse, and lasting too long, but coming at the right time; dark, clotted, stringy blood; wretched, pale, yellowish color of the face; palpitation of the heart on going up-stairs; great debility.

Digitalis, venous, passive congestion, with pale or livid color of the face; coldness of the skin; swelling and painfulness of the feet; all in consequence of some cardiac anomalies.

Erigeron, profuse and too frequent, with violent irritation of the rectum and bladder.

Ferrum, profuse, too frequent, and lasting too long; with a fiery-red face, whilst at other times the face is pale and earthy looking.

Gelsem., almost continuous flow, without any pain.

Hyosc., profuse, with delirium; convulsive trembling of hands and feet; silly manners, rage.

Ignatia, profuse, too frequent and lasting too long; after great mental troubles, grief or fright; empty feeling in the pit of the stomach; great sensitiveness of mind without complaining.

Ipec., very profuse, with heavy breathing; constant nausea.

Iodium, profuse and too early; ovarian region painful, or sensitive to pressure; emaciation, notwithstanding a good appetite; chronic catarrh of the lungs.

Kreosote, profuse and last too long; great distention of the abdomen before the menses, so that she appears as though she were pregnant; blood offensive; leucorrhœa between the menstrual periods.

Lycop., profuse and lasting too long; sadness and melancholy before the menses; yellowish color of the face; frequent jerkings of the limbs; incarcerated flatulence.

Nux vom., profuse and too early; great sensitiveness of the nervous system; can't bear light or noise; is put out of patience when spoken to; gets angry and violent without any provocation; is headstrong and self-willed; or gets frightened easily, and is almost beside herself from the least thing that may happen; she shuns the fresh air. After coffee, liquors, high-seasoned food, drugs, sedentary life.

Phos., profuse, too early and lasting too long; or too late, but very copious; afterwards great weakness, blue rings around the eyes; losing of flesh and great fearfulness; tender, sensitive women, with frequent heat in the back, and cold legs.

Platina, profuse, too frequent and long lasting; dark blood; pressing-down pains; excited sexual desire.

Secale, profuse, dark, without pain, lasting too long, being aggravated by the slightest motion or mental emotion.

Sepia, profuse, either too early or at the right time, venous congestion of the head; one-sided headache, with nausea and vomiting; loathing of all food; pot-belliedness after confinement; constipation; yellow spots on the face.

Trillium, menses every fourteen days, lasting seven and eight days; in the intervening time profuse leucorrhœa of a yellowish color and creamy consistence. The blood is at first bright red, but owing to anæmia, grows pale.

Veratrum, profuse and too early; commencing with vomiting and diarrhœa; sensation upon the top of the head, as if ice lay there; nose, hands and feet cold; irritable, weeping mood.

2. Amenorrhœa

Consists in the *absence of menstruation* in women between the ages of puberty and climaxis, with the exception of the periods of pregnancy and nursing. The *non-appearance* of the menses at the age of puberty has its cause chiefly in chlorosis, scrofulosis, tuberculosis and rhachitis. Rarer are those cases in which it depends upon a degeneration of the ovaries; more frequent those depending upon chronic infarcts or catarrhal processes of the womb in consequence of the above-stated constitutional diseases. It has been observed, likewise, as a consequence of spinal diseases, imperforation of the hymen, and closure of the os uteri.

The *cessation* or *suppression of the menses* is usually a consequence of inflammatory processes, the causes of which have been detailed under the head of Metritis.

Vicarious menstruation is that peculiar anomaly of the menstrual function, by which, at the regular monthly period, hemorrhage takes place, not through the womb, but by means of some other mucous membranes, (nose, lungs, bowels, eyes, ears,) from wounds and from telangiectasias. The reality of such abnormal action is established beyond any doubt, although the reason of its occurrence is still a matter of conjecture.

The symptoms of amenorrhœa consist chiefly of headache, especially on the top, or on one side; heaviness of the feet; dyspnœa; dyspepsia; lassitude; sadness; sleepiness in the day-time; œdema; palpitation of the heart; epistaxis; hæmoptysis; hæmatemesis; swelling of the veins on the lower extremities, in combination with all the constitutional signs upon which the whole disturbance rests as a basis.

Therapeutic Hints.

Acon., during puberty frequent bleeding of the nose; great palpitation of the heart; congestion of the head.

Apis, in young girls, who are constantly busily engaged in this or that, but do nothing right; who let every thing fall out of their hands or break it, and laugh over it; also great congestion of the head, and even delirium; œdematous swelling of the lower extremities.

Apocynum, in young girls, attended with bloating of the abdomen and extremities.

Bell., hæmatemesis instead of the monthly discharge.

Bryon., bleeding of the nose instead of the monthly flow.

Calc. c., in young girls of a plethoric habit, or a scrofulous diathesis, with different complaints, as if the menses would set in, but do not; suppression of the menses from working in water, with anasarca.

Carbo veg., at the time the menses should appear, violent itching of old tettery eruptions.

Caust., epileptic fits during the time of puberty.

China, after suppression by chagrin; secretion of milk in the breasts.

Cimicifuga, in suppression from a cold, mental emotions and febrile symptoms; when rheumatic pains in the limbs, or intense headache, or uterine spasms are present.

Cocculus, instead of the monthly flow: cramps deep in the abdomen; pressure in the chest; dyspnœa; groaning and moaning; great

weakness, so that the patient is scarcely able to speak; paralytic feeling in the lower extremities.

Cyclamen, chlorotic state; great dizziness and headache.

Cupr., typical paroxysms of the most violent cramps in the abdomen, extending up into the chest, with nausea, retching and vomiting; convulsive motions of the limbs, with piercing shrieks.

Digitalis, age of puberty; dark red, bluish color of the face; distended veins on eyes, ears, lips, and tongue; constant yawning; irregular action of the heart; suffocating feeling in bed; frequent desire to urinate; leucorrhœa; painful and swollen feet and limbs, with paralytic feeling in them.

Graphites, after Pulsatilla; congestion of the head and chest; dark redness of the face; constriction of the chest, when lying, with anxiety; itching between the fingers, and tetters; nails grow thick and crooked; the limbs upon which she lies go to sleep.

Hamamelis, vicarious bleeding from the nose or stomach, with great constipation and varices on the legs.

Kali c., age of puberty; spasms of the chest; swelling of the face, especially over the eyes; stiffness and pain in the small of the back; dryness of the skin; is easily frightened; sleepless after 3 o'clock A. M., feeling worse in all respects at that time.

Lycop., suppression from a fright; great agitation of the blood in the evening, or a feeling as though circulation had ceased; great desire for sweet things; sour belching; great fulness in the stomach and bowels; liver spots on the chest.

Mercur., cessation of the menses for several months; headache; weakness of sight; nervous trembling of the hands; earthy color of the face; prolapsus uteri; diarrhœa with tenesmus; œdematous swelling all over; tearing in the limbs, worse at night in bed, with constant sweating.

Millefolium, hæmoptysis.

Natr. mur., age of puberty; melancholy and sadness, or hastiness and impatience; awakes with headache; has frequent fluttering of the heart; the tongue is covered with small blisters, or shows the appearance of a so-called map-tongue; the bowels are costive and move with great difficulty, and there is cutting pain in the urethra *after* urination.

Phos., menses too late, or not appearing; tight feeling in the chest, with dry, tight cough, and spitting of blood, worse before midnight; bloatedness below the eyes; a great deal of vertigo.

Puls., age of puberty, or suppression, especially from getting the

feet wet; nervous, timid, tearful disposition; always anxious about domestic affairs; pale, yellowish color of the face; dyspeptic feelings from eating pork or any thing fat; inclined to looseness of the bowels; thirstlessness and chilliness; always feel worse in a warm room; hæmoptysis, hæmatemesis.

Rhus t., suppression from getting wet.

Senecio gracilis, suppression; inability to sleep, nervous irritability; loss of appetite; coated tongue; bowels constipated; constant feeling of lassitude; disinclined to move about; wandering pains in back and shoulders. Is called "the female regulator."

Sepia, age of puberty or later; headache, with nausea; jerking with the head; paralytic sinking down of the eyelids; yellowness around the mouth, across the cheeks and nose; loathing of all food, even the smell of cooking nauseates her; nausea when riding in a carriage; diarrhœa after drinking milk; cold hands and cold feet, with frequent flushes of heat to the head and face; pot-belliedness.

Sulphur, great congestion to the pelvic organs and to the head; cold feet, and heat on the top of the head; the patient is very irritable, and inclined to religious reveries; chronic inflammation of the eyelids, or other psoric eruptions; dreads to wash with cold water; feels exhausted from talking; all worse when standing; sleepy in the day-time; sleepless at night; great agitation of the blood in the whole body.

3. Dysmenorrhœa, Menstruatio Difficilis.

We understand by this, *painful menstruation,* without regard to the quantity of blood discharged, though in most cases the menstrual flow is scanty.

The different complaints accompanying it set in either before or at the time when the menstrual discharge begins, and generally last a day or two, and sometimes through the whole menstrual period.

We distinguish, according to its causes, three forms of dysmenorrhœa:

1. Dysmenorrhœa in consequence of *structural changes* or *flexions of the uterus,* which has been termed by some writers *mechanical dysmenorrhœa;* compare the related chapters.

2. Dysmenorrhœa in consequence *of congestion* in the uterus, or *congestive dysmenorrhœa;* it usually commences with all the signs of congestion to the pelvic organs—strong action of the heart, congestion of the head, and febrile motions in general. These symptoms continue one, two, or three days, until a more profuse discharge of

blood has taken place. Not only plethoric individuals are prone to it, but also weakly and anæmic individuals. It is possible that, in some instances, this congestive state is induced by a thickened state of the peritoneal lining of the ovaries, and the consequent difficult perforation of a Graafian follicle. Very violent congestion may cause an exudate between the mucous lining and the parenchyma of the uterus, in consequence of which portions of the loosened membrane are thrown off and discharged—*membranous dysmenorrhœa.*

3. Dysmenorrhœa, in consequence of a *morbid sensibility of the nervous system in general and the uterine nerves especially*, or *neuralgic dysmenorrhœa.* This manifests itself as a disturbance in the healthy equilibrium of the mind's action and a dejection of spirits, which commences even before the menses; the menses are attended at their beginning with distressing pains in the uterine region, in the back, and lower extremities, or with neuralgic pains in more distant organs, or with cramps, spasms, &c. It is quite possible that in some cases the violent, spasmodic, labor-like pains in the womb are caused by a spasmodic closure of the os uteri.

Therapeutic Hints.—Compare the foregoing chapters, and likewise those on Metritis and Dislocations of the Womb.

Acon., congestive type, with violent backache; labor-like pressing in the womb; headache; restlessness; necessity to bend double on account of the pain, but finds no relief in any position.

Asclepias syriaca, neuralgic type; *intermitting* bearing-down, labor-like pains, accompanied with a copious discharge of urine.

Apis, congestive type; violent, labor like, bearing-down pains, followed by discharge of scanty, dark, bloody mucus; stinging pain in the ovaries; scanty, dark urine; wax-colored skin.

Arsen., attended with various kinds of complaints; lancinations from the rectum to the anus and pudendum; toothache; restlessness; fear of being left alone; the pains are worse about midnight; seem intolerable, drive to despair and frenzy; external application of warmth relieves.

Bellad., congestive and neuralgic type; violent bearing down, as if every thing would issue out; violent throbbing headache, better from external pressure; throbbing toothache; enlarged pupils; throbbing carotids; drowsiness and inability to go to sleep; spasmodic twitchings; delirium; rage; frenzy; wants to bite; tries to escape, &c.

Bromine, violent contractive spasms some hours after the commencement of the menstrual flow, with subsequent soreness in the abdomen;

loud emissions of flatulence from the vagina; hard swelling in the ovarian region; blue-eyed persons.

Bry., congestive type; tearing in all the limbs, aggravated by motion; great thirst, white tongue; constipation, or diarrhœa in the morning; great irascibility.

Calc. c., various complaints; toothache after the menses; nervous debility; pale bloatedness of the face; cannot bear any thing tight around the waist; stiffness of the nape of the neck; pain in the back; cold hands and feet; sensitiveness to cold air; bad consequences from washing; scrofulous individuals.

Cactus grand., menstruation with most terrible pains, causing her to cry out aloud and to weep; the pains come on periodically, mostly in the evening; the menses are scanty and cease flowing when lying down; constrictive pain in the region of the heart, a feeling as if the heart were grasped and compressed, as by a band of iron.

Caulophyllum, painful contractions, congestion and irritability of the womb; scanty flow; sympathetic cramps in the bladder and rectum; hysterical spasms of chest and larynx.

Chamom., neuralgic type; drawing, clawing pain from back towards front, with discharge of dark, clotted blood; great impatience, with crying and screaming; bloated red face, or one side red and the other pale; hot, sticky perspiration on the forehead; after chagrin.

Cimicifuga, aching in the limbs; severe pains in the back down the thighs and through the hips, with heavy pressing down; labor-like pains; weeping mood; nervousness; hysteric spasms, cramps, tenderness of the hypogastric region; scanty or profuse flow of coagulated blood; between the menses debility, neuralgic pains, tendency to prolapsus.

Cocculus, cramp-pain deep in the bowels, instead of the monthly, with pressure in the chest, and anxiety, sobbing, moaning and groaning; great weakness and fainting spells; convulsive motions of the limbs whenever she wants to use them; after night-watching.

Collinsonia, when complicated with obstinate constipation, piles, and prolapsus.

Colocynth., she draws the lower limbs up to the abdomen, to relieve the colicky pain; diarrhœa after indignation.

Conium, scanty menses; pressing downwards and drawing in the thighs; pain in the mammæ; suppressed sexual instinct; hysteric globus in the throat; vertigo, especially when turning the head or lying down.

Cuprum, typic paroxysms of terrible cramps in the stomach, extend-

ing to the chest, with nausea, retching, and vomiting; also, general epileptiform spasms, with piercing shrieks; great thirst; on swallowing any fluid there is an audible clucking noise in the throat, like that of emptying a bottle.

Graphites, scanty menses, with crampy pains in the bowels and chest, and labor-like pressing in the small of the back; she is full of despairing grief, with weeping; always wavering and hesitating; has vertigo unto falling, and headache unto fainting, in the morning; pimply eruptions on the face about the monthly period; tettery eruptions, especially between the fingers, with great itching.

Hamamelis, severe pains through the lumbar and hypogastric regions, and down the legs; fulness of the bowels and brain, with severe pain through the whole head, resulting in stupor and deep sleep; varicosed veins on the legs; vicarious menstruation.

Lachesis, tearing in the abdomen, beating in the head, pains in the small of the back, and bruised feeling in the hips; all relieved by a full flow; bleeding of the nose before the menses; jealous disposition; craves coffee, and feels better after drinking it; ulcers on the legs, with a purplish circumference.

Magn. c., during the pain no flow; the blood is dark, acrid, and thick; violent, neuralgic pain in the face, right side, driving out of bed; or pain in the right shoulder or in the foot.

Nux vom., twisting pains moving about in the abdomen, with sickness of the stomach; crampy and stitching pains in the pelvic region; soreness across the pubis; cramps in the bladder; constant, unsuccessful urging to defecate; after all sorts of drugs and so-called pain-killers.

Phos., colicky pains; great fermentation in the bowels; a great deal of vertigo; chronic looseness of the bowels; or chronic constipation, with dry, narrow feces; slender-built women.

Platina, great bearing down to the genitals, with profuse menstruation; great fear of death; sadness and disposition to cry; or haughty disposition; tetanous-like convulsions.

Puls., colicky pains, with tossing about; the blood flows by fits and starts; chilliness; thirstlessness; hæmoptoë or hæmatemesis; paleness of the face; mild, yielding, tearful disposition.

Senecio, cutting pains in the region of the sacrum, hypogastrium, and groins, with too early or too profuse menses; she is pale, weak, and nervous, and has a slight cough at night.

Sepia, colicky pains and scanty discharge; great bearing down, which obliges her to cross the limbs; morning sickness and great

sensitiveness against any smell from cooking; toothache; headache; constipation.

Sulphur, scanty menses of a thick, acrid blood; crampy colic; terrible, neuralgic pains in the face; much concerned about her salvation; congestion to the head and heat on the top of it; spotted redness of the face; cold feet; standing increases the pains; chronic eruptions here and there.

Vagina.

Catarrh of the Vagina.

Like all other catarrhal affections of mucous membranes, it is characterized by redness, swelling, and increased secretion of mucus. There are here and there little protuberances, which consist of swollen papillæ of the mucous membrane; it invests either a part of the vagina, or extends all over the organ. The secretion is at first scanty, but by degrees becomes more profuse and opaque. In chronic cases we find the vagina relaxed, its mucous lining bluish-red, and studded with swollen papillæ. This relaxation not unfrequently leads to prolapsus vaginæ. The secretion is in such cases milky, more or less yellow, and sometimes of other appearances. It constitutes what is commonly called *leucorrhœa*, which is frequently the only sign of the existing trouble.

Its *causes* are like those of the uterine catarrh, as recorded in their respective chapters; it is of quite rare occurrence during childhood, in which case it may be induced by those little thread-worms (oxyures) creeping from the anus across the perinæum into the vagina.

Therapeutic Hints.—Compare Uterine Catarrh.

The virulent catarrh of the vagina is spoken of in the chapter of Gonorrhœa.

Pruritus Vulvæ

Is frequently a mere symptom of other diseased conditions of the sexual organs. We find it in the beginning of pregnancy, and also before the menstrual flow; but its most intense forms occur during the climaxis, especially of unmarried women. The itching is so intolerable and distressing that it takes away all sleep and rest, and causes a number of nervous complaints. Physical examination generally reveals no particular change of the parts, except perhaps

some dryness of the vagina or slight eruptions on the labia. Such persons often are subject to hemorrhoidal complaints, and it is possible that this terrible itching is dependent upon a stagnation of blood in the vaginal veins.

Therapeutic Hints.

Ambra, during pregnancy, with soreness and swelling of the parts; numb feeling of the whole surface of the body in the morning; perspiration of the abdomen and thighs in the day-time when moving about; falling out of the hair, and great sensitiveness of the scalp to the touch.

Caladium seguinum, according to the experience of others and my own, the most efficient remedy; the terrible itching causes sometimes the habit of onanism.

Calc. c., itching and soreness; offensive discharge from the ears; cold in the head, with soreness inside of the nose; scrofulous taint.

Cantharis, climacteric age; from rubbing and scratching, the skin swells into little tumors; urinary difficulties.

Carbo veg., itching and burning of the pudendum and anus, especially before the menses; itching, tettery eruptions on the body; leucorrhœa, with burning and soreness; hemorrhoids.

Collinsonia, distressing itching, in connection with prolapsus and constipation.

Conium, violent itching of the pudendum and vagina, especially after the menses, followed by a pressing downwards of the uterus.

Lycop., itching, burning and gnawing, with chronic dryness of the vagina; varicose veins.

Natr. m., falling out of the hair on the mons veneris; dryness, or coolness and paleness of the vagina; aversion to an embrace; eruption on the boundaries of the hair on the neck.

Nux vom., tingling and itching in the parts, which excites sexual desire and induces onanism.

Platina, when the sexual desire is greatly augmented, even to nymphomania.

Sepia, swelling and itching eruption on the inner labia; leucorrhœa, with itching in the vagina and pudendum; ringworm-like eruptions on other parts of the body.

Sulphur, itching in the vagina and pudendum, with pimples all around; itching of the nose after menstruation; itching of the nipples; pimples here and there; hemorrhoids.

Zincum, excessive itching during the menses, inducing masturbation.

Mammæ.

Mastitis, *Inflammation of the Mammæ.*

It develops itself chiefly during the period of nursing, and usually at the commencement; less frequently, during weaning. Its cause is stagnation of milk within the gland or a tube of the gland, induced by sore or imperfect nipples; or weakness of the child, in consequence of which the breasts are not thoroughly emptied of their contents; or undue pressure exercised upon the gland by misfitting dresses may induce it, by causing obstructions in single tubes of the gland and final inflammatory symptoms. Here then we have an inflammation of the *milk-ducts* of the mammæ, which commences within and spreads outward. In other cases the inflammation begins in the *subcutaneous cellular tissue;* a kind of erysipelatous inflammation, spreading inward, and caking a portion of the breast. This form may be caused by external injuries, bruises, exposure to cold, and by fright; or it may be the result of the spreading of the above-named inflammation of the milk-ducts.

It is a most painful affection in either case, and frequently results in formation of abscesses.

Therapeutic Hints.

Apis, burning, stinging pains in the breast; considerable swelling and hardness; erysipelatous inflammation.

Arnica, soreness of the nipples; bruises of the breast.

Bellad., during nursing and weaning, great hardness and swelling; bright redness in streaks along the milk-ducts; throbbing, stitching pain; headache; fever; worse in the afternoon; bowels constipated, and urine scanty.

Bryon., sets in mostly with a chill, followed by fever; great stitching pain in the breast, worse from slightest motion; tense swelling; little or no redness; bursting pain in the head when rising, with dizziness; great thirst; thick-coated tongue; constipation; feces as if burnt; pain in all the limbs when moving.

Graphites, inflamed, cracked nipples; tettery eruptions on the scalp, hands and between the fingers; indurated meibomian glands.

Hamamelis, bleeding nipples, with great soreness.

Hepar, pain in the upper arms and thighs, as if in the bones; great hastiness in drinking and speaking; also in persons who have taken

a great deal of mercury; when suppuration commences with frequent crawls, or when, after the breaking or opening of the abscesses, (which latter, indeed, never ought to be done,) the discharge is scanty, and there still remains great hardness of the inflamed parts.

Merc., especially when after Bell., notwithstanding suppuration sets in; chilliness and profuse sweat, which does not relieve; great nervous weakness and trembling; also in cases where suppuration takes place in different parts of the breast.

Nux v., nipples painful during suckling, with little or no soreness or rawness.

Phos., phlegmonous inflammation; breast swollen; red in spots or streaks; hard knots in different places, with fistulous opening, discharging a watery, discolored, offensive ichor; dry, hacking cough, with hectic fever and colliquative sweats; slender-built women, with a white and tender skin; weakened by disease or loss of fluids.

Phytolacca, sore and fissured nipples, with intense suffering when putting the child to the breast; the pain seems to start from the nipple and irradiate all over the body, going to the back-bone, and streaking up and down, with excessive flow of milk, causing great exhaustion; a few days after confinement sudden chill, followed by some fever and a painful engorgement and swelling of the mammæ; the drawing of milk is impossible. In ordinary *caked breasts* it is called specific. Badly-treated "gathered breasts," with large fistulous, gaping and angry ulcers, filled with unhealthy granulations and discharging a watery, fetid, ichorous pus; the gland is full of hard, painful nodosities.

Rhus t., soreness and swelling of the breast from taking cold, especially getting wet; pain in all the limbs; worse when at rest; great restlessness; the lochial discharge turns red again.

Silicea, chronic cases; when Phosphorus is not sufficient to heal the fistulous opening, with callous edges, or to disperse the hard lumps in the breast; pale, earthy color in the face; loss of smell; hectic fever.

Sulphur, sore and cracked nipples, with bleeding when nursing; the areolæ are covered with yellowish scales, from underneath which there oozes an acrid fluid, with itching and burning in the night; hard lumps in the chest; ulcerating sore, with spongy excrescences and great itching; sleepless nights.

Scirrhus seu Carcinoma Mammæ, *Scirrhus, or Cancer of the Breast.*

The scirrhous form is most frequent; it appears either deep in the gland or nearer the surface, as a roundish tumor, which draws the region of the nipple inward, causing a navel-like depression by its gradually degenerating the surrounding tissue, and its adhesion to the external skin. Its development is slow, but terminates finally in a deep ulcer, with callous, exuberant edges.

The *medullary sarcomà* is of rare occurrence. It appears as one or several tumors, which, in a short time, *destroy quickly the surrounding parts of the gland,* and conglomerate into large masses of irregular lumps.

The development of such cancerous growths rests upon a constitutional contamination, the nature of which we do not know. Its development is, in most cases, slow; often intermitting, making halts for a long time. Finally, it perforates the skin, and appears as an open cancer, making rapid strides to final destruction.

It is generally found in one breast at a time; sometimes in both, and often combined with scirrhous degeneration in other parts of the system. It causes the most intense, burning, stinging, lancinating pains, which deprive the patient of sleep and rest. The open ulcer discharges profusely an offensive ichor; or it bleeds easily and profusely when, by arrosion, blood-vessels become destroyed. The nutritive action of the system is completely prostrated; and we see such patients gradually lose strength and sink, with symptoms of marasmus, œdema of the lower extremities, colliquative diarrhœa or a sudden profuse hemorrhage from the ulcer.

Therapeutic Hints.

Apis, when there is *stinging, burning* pain, whether in scirrhous tumors or in open cancers; pain in the ovarian regions, with bearing down; scanty, dark urine; œdema of the lower extremities.

Arsen., nightly, burning pain like fire, with great restlessness; loss of strength and emaciation; the pains grow better from the external application of warmth.

Asterias rubens, recommended by Petros for cancers of the left breast.

Badiaga ought to be thought of, at least.

Bellad., scirrhous tumors, with erysipelatous inflammation and stitching pain; frequent bearing down of the genitals.

Bromine, after the extirpation of a hard tumor in the left breast,

there appears a hard, uneven tumor in the right breast, which is grown tight to its surroundings; periodical lancinating pains, especially at night, worse from external pressure; grayish, earthy complexion of the face; suppression of menses; emaciation, and great depression of spirits.

Calc. c., indurations of the breast; too early and too profuse menstruation.

Calc. oxalica has, more than any other remedy, relieved the terrible pains in open cancers.

Carbo an., scirrhous tumor, hard and uneven; the skin over it is loose, on places of a dirty, blue-red appearance; the pains are burning and drawing toward the axilla; oppression of the chest; nightly perspiration of the thighs only; desponding.

Clematis, scirrhus, left side, with stitches in the shoulder; or when the whole gland is very painful, worse in cold weather and during the night; worse during the growing moon; whilst perspiring, she cannot bear to be uncovered.

Conium, particularly, if the origin of the tumor can be traced to a bruise.

Graphites, when the tumor grows out of old cicatrices, which have been formed by repeated gathered breasts.

Hydrastis, scirrhous tumor; hard, heavy, and adherent to the skin, which is dark, mottled, and very much puckered; the nipple being retracted; pains like knives thrust into the part; cachectic appearance of the face.

Laches., tumor in left breast, with lancinating pain; in consequence of pressure upon the tumor the pain extends into the left shoulder and down the arm; there is a constant painful feeling of weakness and lameness in the left shoulder and arm, which is aggravated by using the arm. In open cancer, when it has a dark, bluish-red appearance, with blackish streaks of coagulated and decomposed blood; chronic leucorrhœa; painful menstruation on the first day.

Lycop., hard tumors, with stitching pain; circumscribed redness of the face; worse from 4 o'clock P. M.; during the paroxysms of pain she is obliged to walk about and to weep; she feels better in the open air.

Phos., when the ulcer bleeds easily.

Sepia, indurations in the breast and ovaries; yellow, spotted face; chronic leucorrhœa.

Compare besides, Aur. mur., Baryta, Cham., Carbo veg., Hepar, Nitr. ac., Natr. m., Phytol., Rumex, Silic., Sulphur, Zincum.

SPINE.

The spine is a continuation of the head; the skull itself consists, according to Oken, of three dilated vertebræ. Its contents, the brain and its membranes, we find represented within the spinal column by the spinal cord and its membranes, viz.: the dura mater, arachnoid and pia mater, all being continuations of the same membranes, which envelop the brain, and it sends forth branches of nerves to the different parts of the body, like the brain.

In consequence of this similarity in structure, it is obvious that its morbid affections must likewise correspond with those of the brain; and as a clear diagnosis of brain affections during life is already a very difficult thing—sometimes not possible at all—it is allowable to suggest, that we cannot hope for greater clearness in regard to the diagnosis of the morbid affections within the spinal column.

Like the brain, the spinal cord is subject to—

1. Anæmia;

That is, a want of blood, which, however, is only part and portion of other disturbances of the body, and therefore its symptoms not definable; although we may count as belonging to it the great weakness and great want for breath and frequent palpitations of the heart of anæmic individuals in general.

2. Hyperæmia

Is usually combined with congestion of the brain, or local disturbances in the normal circulation of blood; as, hemorrhoids, menstrual anomalies, pregnancy, tumors and so on. It may likewise exist in febrile states of the system, and in severe spasmodic diseases; and Rokitansky has attributed the cause of tetanus to a congestion of the membranes of the spinal cord. Still all these points are far from being fully cleared up yet; and we are, therefore, in regard to the symptoms of spinal hyperæmia, likewise much in the dark. As the most characteristic, however, we may consider: difficulty in voluntary motion, paralysis of the lower extremities, sometimes of the upper extremities. This paralysis always affects *both* sides more or less, never one alone. Difficulty in the respiratory motion, and in rare cases also paralysis of the muscles of the rectum and bladder.

3. Apoplexy, or Extravasation of Blood

Within the spinal cord. This may take place between the vertebræ and the dura mater, or between the different spinal membranes, or within the spinal marrow itself. It is, compared with apoplexy of the brain, of very rare occurrence. This may have its reason partly in the peculiarity of the structure of the spine, and its circulation, having numerous outlets and inlets, thus giving less occasion for stagnation in the circulation; and partly in the greater security with which a long cord like the spinal marrow is held by its membranes, than a larger bulk, like the brain.

1. MENINGEAL APOPLEXY, being an extravasation of blood between the spinal membranes, shows, when anatomically examined, a collection, usually, of dark, coagulated, seldom fluid, blood, which extends over a smaller or larger surface within the spinal cord, sometimes filling the whole spinal column.

Its *causes* are manifold. The blood may, in consequence of apoplexy of the brain, or in consequence of the rupture of aneurismatic swellings of blood-vessels in the brain, percolate into the spine. Its most frequent causes, however, are external injuries, either from a fall, blow or wound, or diseases of the vertebræ. Trismus and tetanus seem to cause it secondarily.

Symptoms.

As long as the brain is not affected, the sensorium of the patient remains undisturbed. Its most characteristic signs are *spasms* of a tetanic nature. Those muscles which receive their nerves from the affected place in the spine are steadily contracted; sometimes interrupted, however, by clonic spasms. As such extravasations of blood generally take place in the cervical region of the spine, we find in most cases the nape of the neck drawn backwards; the back stiff, and the arms contracted firmly in their bends. There is also more or less dyspnœa, irregular action of the heart, and paralysis of the organs of deglutition.

2. MEDULLARY APOPLEXY, an effusion of blood within the spinal marrow itself, is found chiefly in the gray substance of the marrow and of various extent. It may be no larger than a pea, and it may reach the size of a hazle-nut or an almond. Such effusions have been found most frequently in the cervical, less frequently in the dorsal, and least frequently in the lower portion of the spine.

Its *causes* are chiefly inflammation, softening, or other lesions of the

marrow which precede it. In some cases it seems to have been caused by external injuries, (fall, concussion, with or without fracture or luxation of the vertebræ.)

Symptoms.

As premonitory signs we find numbness in the fingers and in the feet; after exertion great weakness and stiffness of the nape of the neck, extremities, or of the whole body. Its existence is characterized by a *loss of voluntary motion*, which may come on suddenly or in the course of a short time more gradually. This paralysis affects all the parts which receive their nerves from that portion of the spine below the lesion, and it is always found on both sides.

Like motion, so is also sensation more or less impaired. The parts below the lesion become on both sides insensible to touch or partially so. If this paraplegia lasts for some time it causes the limbs to shrink.

A lesion higher up affects the actions of respiration and deglutition, and the nearer to the medulla oblongata the more so, causing *cessation* of respiration and consequent death in a short time.

Effusions in the dorsal and lumbar regions may exist for years, and if not too extensive may allow even a partial recovery.

Therapeutic Hints.—The above-described morbid affections of the spine are of pathological interest rather than of practical value. Their declarations during life do not allow a differential diagnosis, and hence we find no cases published on record.

Still they present sufficient symptoms to make them amenable to Homœopathic treatment. Those paralytic symptoms—the loss of sensation, the disturbed action of the lungs, heart, &c.—are amply sufficient to serve as guides for the selection of the remedy; and, if induced by some external injury of the spinal marrow, I consider *Hypericum* as the most important of all our remedies; *Guaco*, however, is, according to Elb, specific for paralysis of the tongue and extremities, in consequence of bloody extravasation within the spine.

4. Hydrorrhachis Acquisita, *Dropsy of the Spine.*

This means an exudation and collection of serum within the spinal column.

There are so few fixed facts yet observed in regard to this affection that its division into an exudation between the vertebræ and dura mater, or between the dura mater and pia mater, or within the

central canal of the spinal marrow itself, is more of a theoretical than practical interest; and it is therefore not to be expected that we should find its symptoms very intelligibly defined. We may consider, however, as characteristic, torpor and stiffness in the voluntary motory apparatus, which is soon followed by an imperfect paraplegia. This paralysis begins in the lower limbs, and gradually spreads upwards in correspondence with the rising of the exudation within the spinal cord. The sensibility of the corresponding parts of the body is likewise impaired, although not to such a degree as voluntary motion is. The sensorium is never affected, as long as the effusion is confined to the spine.

5. Hydrorrhachis Congenita; Spina Bifida.

This is an affection entirely analogous to congenital hydrocephalus. Being an imperfect development of the fœtus, the latter is frequently expelled before its full time. There are cases, however, in which children are born with this affection at full time. Its nature, like hydrocephalus congenitus, is that of a dropsical effusion of serum, either between the dura mater and the vertebræ, or into the subarachnoideal space, or within the central canal of the spinal marrow.

When such effusion takes place, before the vertebræ have perfectly closed, its pressure from within prevents their final closing; thus, from deficiency of the vertebral arches, the spinal column, posteriorly, is cleft in two; hence the name, "*Spina bifida.*" This cleft may be of different degrees. There may be only one of the vertebræ not closed. In the worst cases, this anomaly extends over the whole spinal column. In most cases, however, the split is confined to the lumbar, or the cervical, or the sacral regions. Through this opening the fluid which collects inside presses out, and appears in the corresponding region as a smaller or larger tumor, according to the size of the opening and according to the quantity of fluid contained therein. In almost all cases this tumor grows rapidly after birth; it fluctuates; becomes denser and larger when the child cries, inhales, or presses at stool, or when it is held in an upright position; it sinks in, becomes smaller, when the child is quiet, lies in a horizontal position, or when it exhales. External pressure upon the tumor is painful to the child, often causes convulsions; and, if combined with hydrocephalus, sopor, and general paralytic symptoms. But these signs may all be wanting, when its communication with the spinal canal is very narrow. In some cases it is not fluid alone that protrudes through the opening of

the vertebræ, but also portions of the spinal marrow itself, with its membranes and nerves. Such tumors are less fluctuating than those which consist of mere serum.

In some cases it happens that such a tumor or sac bursts during the birth of the child; in other cases, as already stated, the tumor grows rapidly after birth; the integuments gradually inflame, become excoriated, and finally burst in large circumference; which is followed by convulsions and death. In still others, only small openings may form, and the fluid may gradually ooze out of it; and it may close and again reopen; but in all cases, the children most generally die. Still there are cases on record in which individuals affected with spina bifida have lived to the age of puberty, and longer.

Therapeutic Hints.—As the most important remedies, compare Ars., Calc. c., Calc. ph., Lyc., Silic., Sulph.

6. Meningitis Spinalis.

We understand by this *an inflammation of the spinal pia mater;* as inflammation of the dura mater and of the arachnoidea is scarcely ever met with as a primary disease.

Its pathological character. The pia mater appears pale reddish, sometimes purple, swollen, and infiltrated with a jelly-like and frequently bloody exudation. After a while the redness disappears and the membrane looks dirty, yellowish and grayish, being covered with a coagulated, dirty-grayish and yellowish exudation, resembling inspissated pus. The inflammation sometimes extends over the whole membrane; reaching even into the cavity of the skull. In cases of recovery there are adhesions and thickening of the membrane, hyperæmia, hydrorrhachis and atrophy of the spinal marrow.

As *causes,* we find mentioned, inflammatory processes of neighboring organs, either of the spinal marrow or of the vertebræ; external injuries; exposure to cold, &c.

Remarkable is its epidemic appearance when it is usually combined with cerebral meningitis, as in spotted fever, which compare.

Symptoms.

A combination with cerebral affections of course tinctures the whole at once with brain symptoms, and may even disguise the spinal affection altogether. (See Brain Diseases.) If the inflammation is confined to the *spinal pia mater,* we find:

1. *A pain in the back* at the place of inflammation, which even ex-

tends over the whole spine, and which is aggravated by the slightest motion, as turning in bed or rising, or pressing at stool, or voiding urine; it is better during rest; least in lying on the back; sometimes it is combined with a feeling of constriction around the body, as though a bandage were fastened around it.

2. *Pains in the limbs,* aggravated by motion and touch.

3. *Painful stiffness of the muscles,* which may amount to *opisthotonus,* especially in cases where the inflammation extends over the cervical portion of the pia mater. Even the masseter muscles may be affected, so that the whole resembles tetanus. Respiration is difficult, and the higher the inflammation extends the greater is the dyspnœa, which may end in suffocation. It is a characteristic feature that these tonic spasms are always excited by the least motion of the spine, but not by reflex irritation of the peripheric nerves.

Acute spinal meningitis may pass over into the chronic form, with exudation and consequent paraplegia. Tuberculization of the exudate is followed by œdema of the lungs, catarrh of the bladder, and decubitus. Its prognosis is therefore rather a doubtful one.

Therapeutic Hints.

Acon., after a sudden check of perspiration, or an internal injury; high fever; crawling in the spine, as of beetles; cutting pain, extending in a circle from the spine to the abdomen: numbness of the small of the back, extending into the lower limbs; the arms hang down powerless, as if paralyzed by blows; numbness, icy coldness, and insensibility of hands and feet; all being accompanied by despairing thoughts and dread of death.

Bellad., drawing, burning, and throbbing pain in the spine; drowsiness, with inability to sleep; frequent starting, as if electric shocks were running through the limbs.

Bryon., stitch-like pains from the slightest motion.

Calc. c. and **phos.**, when the inflammation proceeds from a disease of the bony structure of the spine.

Cicuta, frequent jerks in the upper portion of the body; through the dorsal vertebræ and arms, occasional jerkings of the head.

Cocculus, unwieldiness of the lower extremities, the legs cannot be lifted in walking, but are dragged along; the hands feel pithy, lose their sensibility.

Cuprum, clonic spasms, commencing in the fingers and toes, and spreading further; before the spasms, painful jerkings in the hands and fingers, and different parts of the body.

Dulcam., rheumatic persons, who are always worse when the weather changes to cold; after taking cold; also during scarlatina and measles, when the eruption does not fully develop itself.

Hypericum, after a fall; slightest motion of the arms or of the neck extorts cries; the cervical vertebræ are very sensitive to touch; headache; desire for warm drinks; asthmatic spells, or spells of short, hacking cough.

Kali hydroj., after the abuse of mercury.

Mercury, paralysis of the lower extremities, of the bladder, or of the rectum, with occasional jerks in the paralyzed parts; violent pain in the spine, worse from motion; great restlessness and sleeplessness; aggravation at night in bed; insensibility of the skin.

Nux vom., the seat of the pain is the lumbar region; the pain is worse when trying to move whilst lying on the back, also worse in the morning; great deal of belching; sensitiveness of the stomach and region of the liver to external pressure; stool seldom and hard.

Plumbum, in chronic cases, where the paralyzed parts soon fall away in flesh, where the limbs become painfully contracted, and where there are frequent spells of colic with retraction of the abdomen.

Rhus tox., in combination with exanthematic processes; or in con sequence of getting wet; high fever; great restlessness; tingling sensation in the limbs; paralysis of the extremities.

7. Myelitis, *Inflammation of the Spinal Marrow.*

This affection is much less frequent than meningitis; and when it does occur, it almost always causes meningitis.

Its pathological features correspond with those of encephalitis, and consist in redness, swelling and softening, either of the gray substance of the marrow alone in its whole length, or it is an inflammation, which extends diagonally through a portion of the different parts of the spinal cord.

It is brought on chiefly by external injuries, and exposure to cold, and may likewise be a mere continuation of inflammatory processes in neighboring organs. Sometimes it has been observed during the course of typhus, pleuro-pneumonia, and other severe illnesses. Its symptoms embrace deviations in *sensibility* and *motion*.

1. *Sensibility.* The patient experiences at first a sensation of coldness, numbness, prickling and pain in single toes and fingers, which sensation extends from the periphery gradually further up towards

the body; at first perhaps only in one, but soon in both sides. If there be a complication with meningitis, the patient cannot bear the slightest pressure or motion of the parts.

There is a pain in the spine, where the inflammation exists, which is aggravated more by external pressure than by motion; and a feeling of constriction in those parts of the body which are supplied with those nerves the roots of which originate in and near the affected part of the spinal marrow. In some cases these parts are very sensitive, whilst those below are quite dull and insensible. A complete anæsthesia or insensibility, however, takes place only in those cases in which the lesion is a degeneration of the marrow through its whole diameter.

2. *Motion.* It shows itself at first as an unwieldiness of the peripheric muscles, which may end in complete paralysis. If the seat of the lesion be in the lumbar region, it causes paralytic symptoms of the lower extremities, which is of the most frequent occurrence; if it be in the dorsal region, it causes, in addition, paralysis of the sphincter ani and vesicæ; and if still higher up, violent agitation of the heart. A lesion in the cervical region affects the upper extremities, the respiratory motion, duglutition and even speech. Respiration is most seriously interfered with when the lesion exists just above the origin of nerves of the diaphragm. When below it, it is a characteristic symptom that the patient is able to gape, but he cannot cough or sneeze.

As long as the marrow is not disorganized in its whole diameter, so long it is possible that the parts below the lesion may still remain intact; so that, for example, in a cervical myelitis only the upper extremities are paralyzed and the lower not. When, however, the lesion extends through the whole diameter of the marrow, then all the parts below the lesion lose sensibility and motion; so that in such a case the patient consists of two halves: an upper one, which is normal and sound, and a lower one, which is dead, and deprived of feeling and voluntary motion.

A peculiar and frequent symptom of myelitis is *the erection of the penis.* The penis is painfully stiff, but shorter than normal, and may remain so for days. It occurs chiefly in those cases in which the lesion has its seat in the dorsal or cervical region.

Thus far we have seen that the symptoms of myelitis vary quite considerably according to the higher or lower location of the lesion. They vary, likewise, if the seat of the inflammation is confined only to the one or the other lateral cord. In such cases the paralytic

symptoms may be only on one side—at least for a while—with more or less insensibility; or insensibility may exist in one, and paralysis in the other side, as in some traumatic cases.

The lower the seat of the disease, the more slowly it works. Many have lived more than ten years with paraphlegia. Cervical inflammation may terminate fatally in a very short time by its paralyzing effect upon respiration.

Therapeutic Hints.—As myelitis is almost always accompanied by meningitis, compare Meningitis.

Mercurius, as probably the most important; compare Meningitis.

Phos., after sexual excesses; also when in connection with an inflammatory process of the vertebræ: burning pain in the spine; dyspnœa and cough; constipation, with narrow, dry stools; numbness and insensibility of the extremities.

Secale, violent pain in the back, especially in the sacral region; anæsthesia of the limbs; paralysis of the limbs; convulsive jerks and shocks in the paralyzed limbs; painful contraction of the flexor muscles; paralysis of the bladder and rectum.

Silicea, when the bony structure of the spine is affected.

Sulphur, burning and tensive aching between the scapulæ; heat on the top of the head; palpitation of the heart; sleeplessness; often when other remedies do not seem to have any effect.

Veratrum, painful paralytic weakness in the upper and lower limbs: he is scarcely able to drag them; tingling in the fingers, causing anxiety; painful jerkings in limbs.

8. Myelomalacia, *Softening of the Spinal Marrow,*

Is a process of which we know very little about. Its symptoms are quite obscure, sometimes covered by the symptoms of other morbid processes, like those of apoplexy, myelitis, typhus; sometimes even wanting. Its pathological character is a degeneration of the marrow, which loses its natural firmness, and becomes a soft, disorganized, macerated mass of whitish, yellowish or reddish color.

9. Sclerosis Medullæ Spinalis, *or Hardening of the Spinal Marrow,*

A process which seems to take place in consequence of an interstitial exudation. It is found in combination with myelitis, apoplexy and softening. We have no means to diagnosticate this morbid change during life.

10. Hypertrophy of the Spinal Cord.

It is of very rare occurrence, and then mostly in combination with hypertrophy of the brain in children.

11. Atrophy of the Spinal Cord, Tabes Dorsalis.

It consists, according to Rokitansky, in a degeneration of the marrow, in consequence of an over-growth of fibrous tissue, which compresses and destroys the elementary constituents of the marrow.

It is found chiefly in men between thirty and fifty years of age, in consequence of sexual excesses; and in women in consequence of frequent pregnancies. It may be caused, likewise, by muscular over-exertion and exposure to cold, and especially by a suppression of habitual sweat of the feet.

Symptoms.—1. *Motory disturbances.* They commence almost always in the lower (rarely in the upper) extremities, being at first felt as a mere weakness in the limbs. Gradually, however, the motions of the diseased person become awkward; his gait is staggering, uncertain, and he walks with a stride; later he needs the aid of crutches, and finally he can't raise himself at all without help. In a horizontal position, however, some voluntary motions of the limbs are still possible for a good while.

The sphincter ani is last affected; sooner, the sphincter vesicæ; therefore the stream of urine flows weakly, interrupted, and it is difficult to empty the bladder fully, with long-continued dribbling of urine afterwards. The stool is usually retarded, the expelling muscles of the abdominal wall having lost their power.

2. *Disturbed sensibility.* There are now and then shooting pains felt in the lower extremities, and a sensation of numbness and formication; sometimes the patient has a sense of constriction, as being bound tightly by a string around the body. To all this, at a later period, comes a loss of sensibility in the nerves of touch and general feeling, so that the patient neither perceives when he is touched, nor experiences any pain in the paralyzed parts. This is the reason why such a person cannot walk in the dark or with shut eyes. As long as he *sees*, he may be able to guide his motions by the sense of sight, but in the dark or with the eyes shut, he does not know where he is and how he puts his limbs, the sense of feeling being gone. The paralyzed limbs gradually lose their natural warmth and become cool.

This loss of sensibility is greatest when the lesion exists in the pos-

terior columns. It may be wanting, if the lesion exists in the lateral or anterior columns. The motory disturbances, however, exist in all cases.

The duration of this terrible ailment is almost always counted by years. There are cases on record of more that fifteen years standing. The prognosis is almost always unfavorable, and its termination in death may be caused in different ways; by paralysis of the respiratory organs; complication with brain disease; general marasmus; diabetes and affections of the urinary organs, and by other complications, such as pneumonia, bronchitis, tuberculosis, and sometimes general dropsy.

Therapeutic Hints.—We do not find many favorable records in any literature. Compare Meningitis and Myelitis. Sexual excesses, as cause, indicate Calc. c., China, Cocc., Lach., Natr. m., Nux v., Phos., Phos. ac., Sabad., Staphis., Sulph.

Over-exertions, Arn., Arsen., Bry., Hepar, Rhus t., Sulph.

Exposure to wet and cold, Calc. c., Caust., Dulc., Merc., Rhus t., Sepia, Silic.

v. Boenninghausen recommends Aluminium met.

12. Tuberculosis of the Spinal Marrow and its Membranes

Is always in combination with tubercular depositions in other organs, and is, therefore, of little practical importance. Similar are—

13. Tumors of the Spinal Marrow and its Membranes,

Of which we know neither causes nor any pathognomonic symptoms, by which they can be diagnosticated. Like almost all spinal affections they cause disturbances in motion and sensibility.

14. Of Animal Parasites within the Spinal Cord,

Of which there has been found the cysticercus cellulosa and the ecchinococcus.

MOTORY APPARATUS.

Rheumatismus.

We may, as characteristic of rheumatismus, establish the following three points: 1. It attacks either the fibrous tissues, joints, aponeurosis, the sheaths of the tendons, the neurilema, the periosteum, or the muscles and tendons. 2. It is a peculiar, painful affection, caused no doubt by inflammation, nutritive disturbances; and, 3. It comes on independently of other acute and chronic diseases, or traumatic causes, &c.

The principal *causes* of its development are exposure to cold and atmospheric influences, though they may not be the only causes; and thus it is agreed among the profession to call *rheumatic* all those affections which are of a very painful and inflammatory nature, which have become localized in any of the above-stated tissues, and which are not of a secondary, or sympathetic, or traumatic nature, but appear idiopathic; be they caused by exposure to cold and atmospheric influences or not. Its peculiar inclination to change localities is, although of frequent occurrence, not an invariable feature of the disease. Rheumatismus has been divided according to its location, into—

1. Rheumatismus Articulorum Acutus, *Acute Rheumatism of the Joints.*

In this form its seat is the synovial membranes of one or several joints. By a nutritive disturbance they become inflamed, and yield a scanty exudation, which contains neither much fibrin nor a great many pus globules. The external visible swelling is the product of an inflammatory œdema of the surrounding cellular tissue. In severe cases, however, the inflammation may be very high, and the exudation quite rich in fibrin or pus globules. Accordingly, post-mortem examinations show either scarcely any inflammatory signs or a high state of hyperæmic and ecchymosed spots in the synovial capsule, which is filled with a quantity of purulent exudate; even the ends of the bones may be injected and infiltrated by bloody entravasations. The heart and large vessels, in all recent cases, contain a large amount of fibrin; and besides, we find different structural changes of the heart,

such as pericarditis, endocarditis, and myocarditis, as complications of the acute form of articular rheumatismus.

Predisposition to this complaint seems to lie between the years of fifteen and forty. Early childhood and old age are generally exempt. Those appear most prone to the disease who have once been attacked by it; men more than women; and robust persons more than weak and debilitated ones.

The most frequent *exciting cause* is exposure to cold and atmospheric influences. Often we cannot trace its origin to any cause. It is found in all climates, though more in the middle than in the hot or polar zones; and oftener in winter and spring than in the summer and fall.

Symptoms.—An attack of articular rheumatismus is frequently, though not always, preceded by a feeling of general debility and malaise, with occasional chilly sensations. Then the fever commences, and with it the pain in one or several joints. Soon these joints commence to swell, and sometimes to redden; the swelling is not, in all cases, proportionate to the pain. The disease either stays confined in the joint first attacked, or it spreads from joint to joint, attacking even the spine of the symphysis ossium pubis; rarely, however, the joints of the toes. The pain is generally excruciating; worse from the slightest motion or contact; and yet the patient is sometimes tortured by a restlessness which compels him to move, notwithstanding the greatest pain.

The *fever*, in some cases, runs very high, and the temperature of the body ranges at times between forty and forty and a half degrees C.; this is, however, exceptional, as in most cases the temperature is not more than one or two degrees above the natural standard, and the pulse not higher than ninety to one hundred beats in a minute. In some cases we hear murmurs in the heart, even if not complicated with pericarditis; and the respiration is often accelerated. The skin transpires profusely without amelioration, and is often covered with a red or white miliary rash. The urine is generally scanty and saturated with urates and uric acid; which, on cooling, make a turbid deposit.

Its complication with endocarditis amounts, according to Bamberger, to about twenty, and with pericarditis to about fourteen per cent. Complications with myocarditis are much less frequent; and those of pleuritis and pneumonia, meningitis cerebralis or spinalis, occur still less often.

Its course is not at all a regular one, confined to a certain cyclus.

It lasts from eight to twelve days, and may torment many weeks. It very seldom terminates fatally, and then only in case of severe complication with affections of the heart or lungs. Its worst features are an increased liability to new attacks, and chronic derangements of the valves of the heart.

2. Rheumatismus Articulorum Chronicus, *Chronic Rheumatism of the Joints.*

This form originates chiefly in the acute form, and consists in a chronic inflammation of the joints. Post-mortem examination, therefore, reveals the synovial capsule and ligaments thickened, the cartilages of the bones spongiform, and the synovial fluid turbid.

We may distinguish two forms. *One* in which single joints, often for months or even years, remain very painful to motion and contact, and show paroxysms of aggravation, chiefly in the night. On applying the hand to the diseased part, we often observe a sense of crackling or crepitation within on moving the limb. The swelling of the joint may be considerable, or it may be absent; or the joint may only appear swollen, because the adjacent muscles have become atrophied, not being used on account of the pain. This may lead to a false anchylosis of the joint, rarely to the development of a tumor albus or arthrocace.

The *second* form consists in nothing else than repeated attacks of acute articular rheumatism. Individuals subject to it are appropriately compared to barometers, as they feel, "in their bones," every little change in the weather immediately. It is often complicated with muscular rheumatism, and those forms of neuralgia and paralytic affections which are called rheumatic.

3. Arthritis Deformans, or Nodosa, or Pauperum; *Deforming Inflammation of the Joints.*

This form of chronic rheumatism consists in a chronic inflammation of the joints, and is characterized not only by a thickening of the synovial capsules, which are covered by villous excrescences, without any tendency to pus-formation, but also by a porous degeneration of the cartilages, which at last disappear entirely; by an atrophy of the central portion of the epiphyses; and by the formation of osteophytes upon their periphery, which of course disfigure the joints considerably.

This affection is found most frequently between the ages of twenty and forty, more frequently in women than in men, and also more frequently with people in poor than in good circumstances. It increases gradually, sometimes makes a halt, but never disappears; it commences with severe pain in the affected joints, which are principally those of the hands and feet; they become deformed and useless, so that the patient is gradually rendered entirely helpless. Quite remarkable is the symmetrical progress of the disease on both sides of the body. Almost always both hands or both feet are attacked at the same time, and thus it progresses symmetrically further and further. The expansion of the epiphyses causes subluxations of the joints, the fingers are flexed toward the metacarpal bones and drawn towards the ulna, so that they lie like shingles, one upon the other. Although the disease may last many a year, and the patient may grow old withal, yet it very seldom forms a real anchylosis.

4. Rheumatismus Muscularis, *Muscular Rheumatism.*

To this form are assigned all those rheumatic affections which are seated in the muscles, tendons, fasciæ, periosteum, and other fibrous tissues, joints excepted. Post-mortem examination furnishes little positive information as to the nature of the complaint. In some cases the muscles have been found interspersed by hard fibrous callosities; in others, some of the peripheric nerves were found thickened and grown together; and in others, nothing at all could be detected. The pain is rather the most characteristic of all the symptoms; it is the so-called "*rheumatic pain*"—tearing, shooting, stitch-like, screwing, burning; sometimes aggravated, and sometimes relieved by motion, rest, cold or warm applications, &c. The swelling and redness is seldom prominent, often entirely wanting. Its seat is of course quite variable, as it may attack any set of muscles in the body. According to its location it has received different names, the principal of which are:

Cephalalgia rheumatica, or that form which attacks the musculi frontales, occipitales, temporales, the galea aponeurotica, or the periosteum of the skull.

Torticollis rheumatica—"*stiff neck*"—has its seat in the cervical muscles, and interferes much with the free movements of the head; frequently draws the neck to one side, and may, if of long standing, cause a permanent contraction of the muscles of one side of the neck—"*wry neck.*"

PLEURODYNIA RHEUMATICA attacks principally the pectoralis major and intercostal muscles. In the first case, it hinders the motions of the arms; and in the second, it interferes with respiration, and makes coughing and sneezing quite painful, simulating the pains of pleuritis.

OMODYNIA RHEUMATICA is of frequent occurrence, having its seat in the muscles of the shoulders and back; it causes not only great pain on moving the arms, but also when moving the trunk to stoop or to turn.

LUMBAGO RHEUMATICA attacks the lumbar muscles and the fascia lumbo-dorsalis. It is a peculiar feature of this affection that it frequently sets in instantaneously: the individual having been moving about freely and without any pain, may in the next minute be unable to rise from his chair; it comes like a shock, and may remain unabated for eight or ten days.

Therapeutic Hints.—I have preferred to annex the necessary hints to the end of the chapter on the different forms of Rheumatism, because it is not the pathologic form that indicates the special remedy; any one remedy may be indicated in either form; but it is the peculiarity of the individual case which points out the corresponding remedy.

Acon., when there is synochal fever and restlessness; great thirst, dry, hot skin, and scanty, fiery urine; stitching pains in the chest, hindering free respiration, and great agitation of the heart, with anxiety. Articular rheumatism, with hot, pale or red swelling of the joints, shifting sometimes from one to another.

Ammon. phos., recommended by Kurtz for arthritis nodosa; the joints of the fingers, hands, and back are swollen and bent; there is loss of appetite; emaciation; sleeplessness; nervous irritability; evening-fever.

Ant. cr., acute rheumatism, also gout, with gastric symptoms; nausea, vomiting, white tongue, and great thirst at night.

Apocyn. andros., rheumatism and gout; pain especially in the right shoulder and knee; pain in the joint of the big toe; bilious vomiting, with or without diarrhœa.

Arnica, tearing pain, great soreness, numbness and swelling of the affected parts; fears even the possibility of being touched; complains constantly that the bed, couch, &c., whereupon he lies, are too hard. Podagra.

Arsen., burning, stinging, tearing pain, with pale swelling of the joints; great debility unto fainting; restlessness, anxiety, especially

at night; profuse sweat, which relieves the pain but leaves the patient terribly weak; frequent chilliness alternates with heat; the affected limb has to be moved constantly; external application of heat relieves; metastasis to the heart.

Aur. mur., continued gnawing, boring pain deep in the joints, after the inflammatory swelling has subsided.

Bellad., pressing, tearing, cutting pain, deep in the bones, frequently running from the affected joint along the limbs like electric shocks; red, shining swelling of the joints; worse generally at night, from touch and slightest motion, even talking; attended with high fever, hot, dry skin, thirst, throbbing headache, and pulsation of the carotid arteries.

Bryon., stitching pain, tearing pain, worse from slightest motion; generally the patient does not want to move, but sometimes he is compelled to move by an overwhelming restlessness, notwithstanding the pain. The swelling is not principally confined to the joints and chiefly of a faintish redness, streaking out in different directions. There is almost always loss of appetite, white tongue, feeling of dryness in the mouth without thirst, or else great thirst; nausea; pain in the liver or spleen; dry, hard stool, as if burnt; short breathing, with stitching pain in the sides of the chest; fever; easily irritated and angry. Pleurodynia, omodynia, lumbago, muscular rheumatism in general; metastasis to the pericardium or pleura.

Cactus grand., metastasis to the heart, with a sensation of constriction in the region of the heart, as if the heart were grasped and compressed, as by a hand of iron.

Calc. c., chronic arthritis, with swelling of the joints, worse with every change of the weather; also omodynia in right shoulder, or from the left shoulder down along the arm and towards the heart; lumbago; after Rhus tox. if it did not sufficiently relieve. Frequent sensation of coldness upon the top of the head; profuse sweat and coldness of the feet; great inclination to perspire; scrofulous diathesis.

Camphora, according to Kreussler, when the morbid process seems to yield under the influence of the proper remedies but for a short time and then comes back again, attacking part after part of the body, even internal organs.

Caulophyllum, rheumatism of the wrists and finger-joints, with considerable swelling; also when shifting from the extremities to the back and nape of the neck, with spasmodic rigidity of the muscles

of the back and neck; panting breathing; oppression of the chest; high fever; nervous excitement; delirium.

Caust., tearing pain with stiffness and swelling of the joints; contraction of the flexors; the pain is worse on exposure to fresh air, better in the warmth of the bed; great weakness and lameness of the lower limbs and trembling of the hands. Chronic arthritis; old warts on the eyebrows and nose.

Chamom., drawing pain in the muscles of the upper or lower extremities, much aggravated during the night, with tossing about, as if beside himself, and great irritability of temper; hot perspiration, especially about the head; redness of one cheek and paleness of the other.

China, pain in all the limbs, worse especially from external pressure, so that he is even afraid of any one coming near him, lest he might be touched; great weakness; paleness of the face; bloated abdomen; after severe illness, loss of blood, &c.

Cimicifuga, pleurodynia of the right side of the chest; pain worse from motion, extorting screams; articular rheumatism of the lower extremities, with much swelling and heat of the affected parts.

Coccul., when the upper arm or thigh cannot be moved in their joints on account of a lame pain.

Colchicum, burning, tearing, or jerking pains; shifting; without swelling and redness, or with only a moderate, pale swelling; constant chilliness even near the hot stove, intermingled with short flushes of heat; dry skin or profuse sweat; suddenly breaking forth and disappearing again in the same way; palpitation of the heart; gastric symptoms before and during the attack; Colch. is said to be indicated especially when the acute form merges into the chronic, or when, during chronic rheumatism, acute attacks set in; also in metastasis to the heart.

Collinsonia has been given in diseases of the heart following acute rheumatism.

Coloc., all sorts of pains, with sense of formication and numbness; frequent urination; skin cool; chilliness with inclination to perspire.

Dulcam., chronic rheumatism, which gets worse from any little exposure to cold, or any change of temperature from warm to cold; also when rheumatic pains set in after acute cutaneous eruptions, or when the chronic form alternates with attacks of intestinal catarrh.

Ferrum, omodynia, either side; pain, especially in the deltoid muscle, of a constant drawing, tearing, laming nature, worse in bed;

has to get up and to move slowly about; worse, also, from being too lightly covered for any length of time; face pale, flushing easily; no swelling.

Gnaphalium, gouty pains in the great toes.

Graphites, arthritic nodosities on the fingers; swelling of the toes and balls of the toes; coldness of the dorsum of the feet.

Guajac., arthritic lancinations and subsequent contractions of the limbs; the pain is excited by the slightest motion and accompanied by heat in the affected parts, especially when the patient has been injured by mercury. It also promotes the spontaneous breaking of gouty abscesses, relieving greatly the sufferings of the patient.

Hamam. is recommended by Ludlam as "a *local application* to all kinds of articular rheumatism." The main characteristic of Hamam. is the *great soreness* of the affected parts; it may therefore, no doubt, act quite favorably in cases where this soreness is a prominent feature.

Iodium, in chronic arthritic affections, when they are characterized by a violent, nightly pain in several joints, without swelling; previous abuse of mercury.

Kreos., when the rheumatic pain in the joints, especially in the hip and knee-joints, is associated with a feeling of numbness, loss of sensation, and a feeling as though the whole limb were going to sleep.

Laches., rheumatic swelling of the index-finger and wrist-joint; rheumatic pains in the knees, stinging, tearing, and sense of swelling; swelling of the knees, with tension in the bend of the knees, difficulty in stretching the limb, and pain of the thigh (posteriorly) as if swollen; bluish-red swellings. The pains are generally worse after sleeping; they do not improve after profuse sweats; the left side is generally the most affected; or the affection commences on the right and goes over to the left side. Arthritic contractions of the limbs after the abuse of mercury and quinine.

Ledum, rheumatic pains in the lower extremities, in the hip and knee-joints, especially when they commence from below and go upwards; arthritic nodosities with violent pains, which grow worse in the evening, when getting warm in bed, and last till midnight.

Lycopod., the pain is mostly tearing; oftener on the right side; with and without swelling. In lumbago, if Bryonia has not sufficiently relieved, and the pain is worse from the slightest motion. In chronic forms, especially in old people, attended by forgetfulness; vanishing of thoughts; congestion of the head; vertigo; wretched countenance; sour belching; nausea early in the morning; flatulence in the stomach and bowels, causing great distress; constipation of the

bowels; urine dark and turbid, or with sediment of red sand; oppression of the chest from flatulence; papitation of the heart; frequent flushes of heat with nausea; dry skin. The pain is generally worse at night: better in warmth.

Manganum, arthritis vaga, shifting from one joint to another, or affecting cross-wise; with shining redness and swelling of the joints; pain worse from touch and motion, and at night, causing the patient to moan and groan constantly.

Menyanthes, painful, spasmodic jerking of the lower extremities in gouty persons, with deposits of calcareous matter in the joints.

Merc., tearing pain, not relieved by sweat, which is often very profuse; worse at night, and in the warmth of the bed; worse also in cold and damp air; attacking joints and muscles, with and without swelling; or a mere puffiness of the affected parts; of a pale, or a slight pinkish color; collection of saliva in the mouth of a copperish taste; slimy tongue; bitter or sweetish taste; violent pain in decayed teeth; swollen gums; swollen glands of the neck, painful when swallowing; griping in the bowels with diarrhœa, especially towards evening, with frequent urging; constant feverishness; internal heat, with chilliness and perspiration; sleeplessness and restlessness at night; great debility.

Nux v., especially in rheumatism of the trunk, limbs not excepted; gout, in its incipient stage, in habitual drinkers; over-sensitiveness to pain; constipation; during hard stool violent pain in the affected part; scanty, dark urine; heat mixed with chilliness, especially when moving; perspiration relieves.

Phos., drawing, tensive pains, from slightest exposure to cold, with vertigo, oppression, and sense of lameness and weakness in the lower limbs.

Phytolacca, chronic form; obtuse, heavy aching pain, generally worse in damp weather; with and without swelling; periosteal rheumatism with syphilitic taint; nightly aggravation; enlargement of the glands of the neck and axilla.

Platina is recommended by Elb for the incipient state of endo and pericarditis, in consequence of articular rheumatism, especially when there is immense anxiety and great palpitation of the heart.

Pulsat., drawing, tearing pain frequently shifting from one part of the body to another, or attacking only one side; usually attended by swelling and redness; pale face; slimy mouth; bitter taste; loss of appetite; no thirst; constant chilliness, with heat in the affected part; mild, quiet, tearful disposition; *worse* towards evening and at night

in the warm room; *better* from changing position and moderately moving about in the fresh air; also from uncovering the affected part.

Rhod., nightly drawing-pains in the periosteum from raw, stormy weather; worse during rest, disappearing when moving.

Rhus t., drawing, tearing pains in fibrous tissues, joints, and sheaths of the nerves, attended with a sense of lameness and formication in the affected parts, with or without swelling and redness, caused by exposure to wet, damp weather, to rain, or bathing, or straining; *worse* during rest and when commencing to move; better from continued motion and dry, warm, external applications; great restlessness.

Sabina, chronic arthritis and gout; the patient cannot bear a heated room; he feels decidedly better in the cool air and in a cool room.

Silicea, in chronic gouty nodosities.

Spigelia, when complicated with endo or pericarditis.

Sticta pulm., inflammatory, articular rheumatism.

Sulphur, chronic rheumatism; podagra; tearing, stitching pain; or when after Bryonia the stitch-pain leaves, and a dull, aching, pressive pain remains; sleeplessness; hot head and cold feet.

Thuya, rheumatic and arthritic pains, especially of a sycotic or gonorrhœal nature; sweating of the parts not covered; those which are covered keep dry; sensation as if the whole body were very thin and delicate and could not resist the least attack, as if the continuity of the body would be destroyed.

Verat. alb., electric jerks in the affected limbs; worse in bed; necessity to sit up and let the legs hang out of bed, or must walk about.

Verat. vir., rheumatism, especially in left shoulder, hip, and knee; also recommended in endocarditis and pericarditis.

Zincum, general, articular rheumatism, with tearing pain, lameness, and trembling or crampy pain; or twisting in the affected limbs, and frequent jerking of the whole body during sleep.

Gout, Podagra, Arthritis.

Gout differs entirely from rheumatism in the form of its attacks, (of which, later,) by the overcharge of the blood with uric acid, by its never attacking children, and only grown persons after thirty years of age, and men oftener than women, especially such as are accustomed to a rich table and the habitual use of beer or wine, and who take very little bodily exercise. It is, therefore, a very rare occurrence to find a poor man suffering with podagra. According to statistics

its main cause is a hereditary disposition, which is generally aroused into activity by the above-stated overcharging of the blood with nitrogenized substances and a want of exercise to consume the too-liberal supply.

The repetition of diverse, acute attacks of gout and its chronic form causes peculiar changes in the joints which it attacks. We find in and around them besides the ordinary signs of inflammation a chalky deposit, consisting principally of urate of soda and potash. This deposit either lines the internal surface of the synovial capsule like a soft mush, or incrustates the cartilages of the bones as a hard mass, or even fills the whole joint as though it had been injected with plaster of Paris, growing hard, and causing anchylosis. At the same time such gouty deposits may take place on the external surfaces of the synovial capsule, on the tendons and in the surrounding cellular tissue, and give rise to hard nodosities, *tophi*. In some persons such deposits have been observed on other and different parts of the body, especially in the skin.

The course of an acute attack of gout is as follows: The gentleman in question generally does not dream of what may happen to him over night. He feels fine; he has enjoyed a good dinner and supper as usual, the proof of which we can read in his face; his cheeks are full, round, and of a florid complexion, only his nose looks a little suspicious. There we observe a fine network of enlarged little blood-vessels, tinging it rather redder than would be necessarily required for a good-looking nose. He is fat, and his stomach and belly are in quite a prosperous condition, looking very well cared for. It may be, though, that in the last few days he did not feel altogether right; his appetite may not have been quite as sharp, his sleep not quite as refreshing; he may have had some palpitation of the heart, and his urine may have been saturated and turbid. All this, however, is generally overlooked, or attributed to some imprudence in diet. Then, all at once in the night, generally after midnight, the gentleman is aroused by a burning, screwing pain in one of his big toes, which gets worse from hour to hour. If the toe were screwed between a vice, the pain could not be worse, and the poor sufferer, unaccustomed to such severe handling, moans, and groans, and tosses about without avail. The toe soon commences to swell and redden; there is great thirst, high fever, dry skin, saturated urine, and great mental irritability. Finally, towards morning a remission of the violent pain takes place; the day passes along comparatively easy, until next night the same violent paroxysm recurs.

In this way it goes on for about a week, when, finally, the pain, redness, and swelling gradually disappear, and, at last, the skin of the affected toe peals off. This is a first attack of PODAGRA. Gout almost always commences in this way. In later attacks, however, other joints may become involved. If, then, it attacks the *finger-joints,* it is called CHIRAGRA; if the *knee-joint,* GONAGRA; if the *shoulder-joint,* OMAGRA. These acute attacks are at first far apart. Years may intervene between them, but finally the intervals grow shorter, and the acute, regular attacks become *chronic* and *irregular.*

Such chronic, irregular attacks often last for weeks and months, and always cause the above-stated deposits in and around the affected joints. They are generally not quite as painful, nor attended with as high a fever as an acute, regular podagra: they are always preceded by digestive derangements, and they attack several joints at the same time. After the attack subsides, the swelling does not, but remains, at first soft and doughy, until at last it changes into a hard tophus, which grows with each subsequent attack. Such hardened, chalky deposits within the joints frequently give rise to the formation of abscesses, which break and discharge masses of pus mixed with calcareous substances.

At still other times this morbid process attacks internal organs, such as the *stomach, brain,* or *heart;* then it is called *anomalous gout.*

Gout of the stomach manifests itself as a very severe cardialgia, with violent vomiting, frequently even of blood; *gout of the brain,* as a kind of apoplexy, or violent headache, vertigo, furibund delirium, and subsequent stupidity and sopor; and *gout of the heart,* as irregular palpitation of the heart, disturbed circulation, dyspnœa, and syncope.

It might be quite difficult to diagnosticate such spells as gout, if it were not that they are almost always preceded or succeeded by gouty manifestations on the peripheric organs. This settles the question. Gout is a stubborn disease; but is not fatal unless complicated with other diseases.

Therapeutic Hints.—As the principal exciting cause of its first development is high and lazy living, this, of course, ought to be stopped, as a first step.

In *acute attacks* the following are principally indicated: Acon., Arn., Arsen., Bry., Calc. c., Sabina, Sulphur.

In chronic gout the main remedies are, Am. phos., Calc. c., Caust., Coloc., Guajac., Iod., Lyc., Mangan., Natr. m., Sabina, Silic., Sulphur.

For special hints compare Rheumatism.

Rhachitis, *Rickets.*

This affection is characterized by an imperfect ossification and a preponderance of cartilaginous and fibrous growth in the bony structure; in consequence of which the bones remain *soft*, and are easily bent or even broken; the former especially on the epiphysis, and the latter in the diaphysis of the long bones. This explains fully the deformities of children thus affected; their bow-legged extremities and crooked spine; their chicken-breasted thorax, and their dwarf-like appearance. We find the disease most frequently between the period of first and second dentition; before and after that time it is of rare occurrence. Its cause is quite obscure. Some think it to be a want of proper food, deficient in phosphates; others, a deficient assimilation of such constituents; and still others, a nutritive disturbance in the cartilages of the epiphyses and in the periosteum, nearly related to inflammatory conditions.

One of its first signs is an obstinate diarrhœa, with foamy, fermented discharges and emaciation. Such children commence to lie quiet, with limbs stretched out; they are averse to being moved or pushed. By-and-by a tumefaction of the epiphyses becomes obvious. If now, before the child makes attempts to walk, the morbid process be arrested, there results no deformities of the limbs from it; showing clearly that the curvatures of the extremities originate in an undue pressure upon the too soft bones, whilst, on the contrary, the thorax-bones do get out of shape, in consequence of the long-continued horizontal position in which the child is kept. The teething process of such children is very slow; none being cut within the first year of life.

When the rhachitic process develops itself after the second year, it is not necessarily preceded by a chronic diarrhœa. It generally attacks the lower extremities first, and later the bones of the pelvis and thorax. This is the reason why, if the morbid process be now arrested, such children may grow bow-legged, but not mis-shaped in their trunk.

Therapeutic Hints.—It ought to be ascertained, first, whether the milk which the child receives is of a proper condition. When the child has been fed on paps and other mere farinaceous food, its diet ought to be changed to nitrogenized substances, such as rare beefsteak, mutton chops, &c.

When, notwithstanding the most proper kind of nourishment, the disease still develops itself, the child needs medicinal help.

For the preceding *chronic diarrhœa* compare the corresponding chapter.

For the swelling of the bones compare—

Aselli jecoris oleum, which is the best used in the form of a trituration, so that a few drops of cod-liver oil become thoroughly mixed with sugar. It is not at all necessary to give the oil by the spoonful.

Bellad., curvature of the lumbar vertebræ; squinting; enlarged pupils; pain in the throat when swallowing; thick, protruding belly.

Calc. c., slow, difficult teething; the fontanelles remain wide open; the abdomen is greatly enlarged; there is a whitish, frothy diarrhœa, and there may be curvature of the spine and deformities of the extremities.

Calc. phos., not less important than Carbonica; its principal indications are the fontanelles, which remain wide open; the diarrhœa and the emaciation of the child. Both the Calc. c. and phos. have been administered in large, crude doses with far less good results than in a fine homœopathic preparation.

Previous abuse of mercury may call for Asa f., Aurum, Hepar, Jod., Sulphur; and still other peculiarities of the case may point to Angust., Fluor ac., Lyc., Merc., Mezer., Phos., Phos. ac., Sepia, Silic., Staphis., Symphytum, and others.

Osteomalacia, *Softening of the Bones.*

When *rickets* is characterized by a want of ossification, whereby the bones do not become bones, but *remain soft* cartilaginous substances, so is *osteomalacia,* on the contrary, a *getting soft again* of already perfectly ossified structures. There the necessary calcareous constituents are not assimilated at all; here the already assimilated calcareous constituents disappear again. The next cause of this solution and resorption of the calcareous structure is just as obscure as that of rickets. It may be a subinflammatory process within that structure, because it changes the bones into a porous, spongy or areolar tissue, similar to osteitis; is found chiefly after difficult confinements, commencing in the injured pelvic bones, and is attended with great and severe pains in the affected parts. Osteomalacia is a very rare disease, and has been found, as yet, only in women after confinement. In some cases the morbid process is confined to the pelvis and spine, in others it spreads over all the bones of the skeleton, except the bones of the skull. The calcareous constituents being extracted, it is obvious that

the whole frame loses its form. In this way originate curvatures of the spine; the pelvis, from the pressure of the legs, is flattened in on both sides and projects in front with its pubic region; the extremities likewise become bent, and in some cases it has been observed that women of a stately size gradually shrunk down to a dwarf's figure.

The disease commences with severe boring and tearing pains in the affected bones, worse on motion and better at rest; they are usually attended with an intermitting or remitting fever; the saliva and secretions of the skin are said to contain large quantities of phosphate of lime; the general condition may, in some cases, for a long time be not essentially affected, whilst in others the general system early shows the signs of a deep-seated cachexia.

The old school declares this disease as absolutely fatal, after severe suffering of several years. What Homœopathy can do I am unable to say, as I do not find a single case mentioned in our literature. I should suppose, however, that Arnica, Rhus t., or Symphytum, after difficult confinement, might prevent, and that Calc. c. and phos., Fluor. ac., Silic., and others, might stop its further development.

Osteitis, Caries, Necrosis, Exostosis.

Osteitis is an inflammation either of the periosteum, or of the bone itself, or of its diploë or its medullary membrane, or of all these different structures together. It may be caused by external injuries, such as fractures, bruises, &c., or by chemical influences; or it may be the consequence of certain constitutional contaminations, like scrofulosis, arthritis, scurvy, syphilis, mercurial poisoning, or suppressed acute or chronic skin diseases.

Its symptoms generally consist in a deep-seated, heavy, burning pain, which assumes a tearing character when the periosteum is at the same time affected. This pain is generally worse at night (especially if of syphilitic origin) and worse also from pressure and motion. There is generally a feeling of heat in the bone, and if the inflamed bone is superficial, its integuments soon participate in the inflammatory process. Febrile actions are generally wanting, except in acute cases. Such an inflammation may terminate in

Caries, by which we understand an ulceration of the bony structure; or even in

Necrosis, which means a dying off of a portion of the bony structure, which. in favorable cases, is gradually thrown off and replaced by a new formation.

In other cases the inflammation causes an exudate upon the bone, which hardens and grows fast to the bone, thus augmenting its natural size more or less considerably. This is called Exostosis.

Therapeutic Hints.

Angustura, caries, especially of the long bones; great longing for coffee, the use of which must be entirely prohibited; great sensitiveness of mind, very touchy, easily irritated from the least provocation.

Asa f., osteitis, caries in scrofulous individuals and after the abuse of mercury; bluish redness and swelling of the external parts; ulcer with bluish hard edges, which are very painful to the slightest touch; discharge of thin, very offensive pus. Pulsations in the pit of the stomach, perceptible to the eye and hand; ill-humor and irritated mood.

Aselli jecor. ol., in different affections of the bones, in scrofulous subjects, especially when the extremities of the bones are affected; fistulous ulcers, with raised edges, easily bleeding, and discharging a flocculent pus and ichor of a nauseating smell.

Aurum, caries of the nasal bones in consequence of ozæna, diffusing a most horrid smell; caries of the cheek bones and exostosis of the skull and other bones, with boring pain, after the abuse of mercury.

Bellad., scrofulous individuals with glandular swellings, crusts on the corners of the mouth and sore, swollen and bent vertebræ; exostosis on the forehead, and caries of the palatine bones.

Calc. c., osteitis, with swelling; caries and necrosis of scrofulous individuals; diarrhœa, hard, bloated abdomen; chronic symptoms on the scalp; emaciation.

Calc. phos. for similar affections, and especially after fractures, when the callus does not ossify.

China, caries, especially where there is profuse suppuration.

Fluor ac., caries in consequence of syphilis or abuse of mercury; caries of the temporal bone.

Jodium.

Lycop.

Merc., osteitis, caries; pain, as if the part were broken.

Mezer., periostitis and swelling of the bones, especially on the tibia, with the most violent nightly pains in the bones.

Nitr. ac., especially in syphilitic affections and after the abuse of mercury.

Phosph., exostosis on the skull, with violent tearing and boring

pains, worse at night; swelling of the glands of the neck; sour belching and vomiting; burning in the mouth, œsophagus and stomach; constipation; emaciation; fainting when raising the head; lame weakness of the extremities.

Phosph. ac., osteitis, and also when after an external injury of the periosteum there remains a feeling as though the bone were scraped by a knife.

Ruta, periostitis and pains in consequence of external injury, with erysipelatous inflammation of the external parts.

Silicea, one of the most important remedies in the different affections of the bones, with fistulous openings and discharge of thin pus and bony fragments.

Staphis. is recommended, especially in osteitis of the phalanges of the fingers.

Sulphur, after suppressed itch and mercurial poisoning.

Tuberculosis of the Joints, *White Swelling.*

Tuberculosis being a constitutional disease, may localize itself, as has been demonstrated in the chapter of Tuberculosis, in different parts of the body. When localized in the joints, it attacks by preference the hip, knee, ankle, elbow, or wrist-joints, and was called by older writers, on account of the peculiar glossy, shining appearance of the affected joint, "*white swelling.*" "In its incipiency we find the synovial membrane injected, somewhat opaque, and here and there softened or thickened by fibrous exudation. There is effusion of lymph, which assumes a pulpy consistence of a pale yellowish or greenish color. The articular cartilage is of a dull whitish or slightly grayish aspect, and somewhat thickened, softened and partially separated from its osseous connections. The cancellated structure of the bones is abnormally vascular, light, porous, humid, and at the same time easily broken and cut. Not unfrequently its cells are distended, with yellowish tubercular matter, of a semi-solid, osseous consistency; or, this substance presents itself in the form of distinct masses, free or encysted, and, perhaps, not larger than a millet-seed. The ligaments appear abnormally red, tumefied and softened. The synovial fluid is generally increased in quantity, but rarely to any considerable extent. In its further progress, the lymph gradually increases in quantity, and is often intermixed with a little sero-purulent matter, or thick, greenish-looking pus. The synovial membrane is partially destroyed, and what remains is of an opaque, muddy and

ragged appearance. The cartilage is ulcerated, pulpified, discolored, perforated, and almost completely detached. The bony structure is very red, soft, carious, rough, and easily crumbled. The ligaments exhibit well-marked signs of inflammation, being loose and spongy at one joint, attenuated at another, and perhaps thickened or hypertrophied at a third. In this way the structures of the joint are completely subverted, with hardly any trace of their original appearances. Pus is more usually seen, often, indeed, in large quantities, sometimes thick, poltaceous, caseous, ichorous or sero-sanguinolent. In some instances it is very thin and almost black; evidently from the effects of the necrosed condition of the bones."

"In case of recovery, the joint will be found to be filled by a white, fibrous, organized substance; the extremities of the bones being anchylosed, or firmly attached by new matter to the surrounding structures. It is very rare that a new socket is formed; and yet this is not impossible. In time, the artificial joint may admit of considerable motion, but, in general, this is extremely restricted. Occasionally an imperfect ligament is formed round the bony remnants, and the surface of these bony remnants may even become slightly tipped with cartilage. Finally, osseous growths—short, irregular, and friable—sometimes make their appearance upon the bones, in the vicinity of the former disease." Gross.

This is the general character of the pathological changes which tuberculosis causes, when located in the joints. I shall now speak of the several joints which it attacks in preference, causing affections which are not unfrequently met with in practice.

Coxarthrocace, Coxalgia, *Hip Disease.*

This affection is most frequently found from the third to the seventh year. Growing out of a constitutional diathesis, it may be excited, by external injuries, exposure to cold, or different, wasting diseases; sometimes it comes on stealthily without any appreciable cause. It seldom, or never, attacks both hip-joints, but is frequently complicated with psoas abscess, ophthalmia, pulmonary phthisis and degeneration of the lymphatic glands.

In its first stage we observe, that the child is easily tired, and complains of a pain in the *knee*, on its inner side, which is worse from motion, so that the child limps when walking; this pain is likewise worse in the night; and is frequently attended with spasmodic jerking of the extremity, disturbing sleep. The knee itself shows

neither swelling nor discoloration. Gradually the pain extends to the thigh and leg, and in some cases it is felt most keenly in the tendo Achillis, or over the instep; or it shifts from one place to another; or may disappear for a short time entirely. Finally, after weeks and even months, the pain is also felt in the hip and its neighborhood; and then most intense and persistent directly over the articulation, deep-seated, and of a dull, gnawing character. Up to this time there is no perceptible impairment of the general state of the system. By-and-by, however, during the *second stage*, when the pain in hip and knee increases still more in violence, when the buttock flattens, the gluteo-femoral crease disappears and the limb apparently grows longer, with nightly spasmodic twitching and wasting of its muscles: then we also find the sleep habitually disturbed by unpleasant dreams, and frequent starting of the patient out of sleep with crying and screaming; the appetite becomes impaired, the bowels often constipated, and there is more or less fever, especially at night, followed frequently by copious sweats. Now the patient begins to show a care-worn countenance; he grows peevish and irritable, and loses flesh and strength.

In the third stage matter forms within the diseased joint. "This is indicated by an increase of pain on the slightest motion; by a sense of throbbing and tension, deep and persistent; by severe swelling of the gluteal region, generally most prominent at the centre of the articulation; by œdema of the subcutaneous cellular tissue; by a remarkably turgid and enlarged condition of the subcutaneous veins; by violent rigors, followed by high fever and copious sweats. As the matter increases in quantity, it gradually works its way towards the nearer surface; its approach being denoted by the occurrence of a circumscribed, erysipelatous blush. Here there is generally distinct fluctuation, and the parts, feeling soft and baggy, soon yield at one or more points, followed by the escape of the contents of the sac." Gross.

These openings may in different cases form in different places: in the gluteal region, either directly above the joint, or in its immediate vicinity; on the upper and back part of the thigh, below the great trochanter; on the upper and inner surface of the thigh; on the superior and external part of the groin; on the sacro-sciatic notch; or on several points, either simultaneously or successively. Or the matter may partially escape internally, when the bottom of the acetabulum is perforated, into the rectum, bladder or vagina; or it may collect in a sort of pouch, between the inner surface of the iliac bone and the soft parts of the pelvis.

By this time the limb has actually grown shorter from one inch and a quarter to several inches, and the foot points either directly forwards and outwards, but oftener inwards. The thigh is generally flexed upon the pelvis, and turned either towards the sound limb or is bent off from it. The great trochanter generally lies directly over the acetabulum, or in its immediate vicinity; whilst the head and neck of the femur are usually so much wasted as to exist only in a rudimentary form. Dislocations of the femur are exceedingly rare; and are possible only in such cases where there is an extensive destruction of the soft parts; allowing the superior extremity of the bone to move about, and to insert itself into a new position.

Therapeutic Hints.

Arsen., third stage; the child is emaciated, exhausted; is very restless; has diarrhœa, worse in the middle of the night; wants to drink constantly, but little at a time. It is indeed going fast if Arsenicum should not soon change the scene for the better.

Bellad., burning, stinging in the articulation; nightly aggravation, with starting in sleep, fever, and congestion of the head; or drowsiness, with inability to go to sleep.

Calc. c., second stage; sweat on the head during sleep; scratching the head impatiently when getting awake; frequent desire for boiled eggs; abdomen hard and bloated; inclined to diarrhœa, especially towards evening; glandular swellings on the neck.

Calc. phos., third stage; it puts an end to the further destruction of the bone, stops suppuration and promotes new organization.

Carbo veg., third stage; ichorous, offensive, blackish discharge; deeply-sunken state of the whole organism.

China, profuse suppuration, sweat, and diarrhœa.

Colocynth., second and third stage; difficult urination of dark urine; green diarrhœa; lies upon the affected side with bent-up knee; the pain is of a crampy nature, as though the parts were screwed in a vice.

Iodium, intermittent, sharp, tearing pain between the left hip and the head of the femur, increased by moving the joint; glandular swellings; abuse of mercury.

Kali c., third stage; crampy tearing in the hip-joint and knee; bruised pain in the hip-joint when moving and sneezing; twitchings of the muscles of the thigh; dull pain in the side of the knee when walking, and especially when extending the limb; starting when

asleep; twitching of the limbs during sleep; all the symptoms worse towards three o'clock A. M.; great tendency to start, especially when being touched.

Laches., in any stage, if there be a regular aggravation of febrile motion in the afternoon about three o'clock; an aggravation of general malaise after sleep; a notable offensiveness of the alvine discharges, even if of a natural consistence, and previous abuse of mercurial preparations; before or after Laches. is frequently indicated

Lycop., when there is an aggravation of fever and suffering, especially from four to eight o'clock P. M.; great fear of being left alone; violent jerking of the limbs and body, awake and asleep, and great crossness on awaking out of sleep.

Mercur., first and second stage, with prominent aggravation in the night, restlessness and inclination to sweat; is frequently indicated before or after Belladonna.

Phos., hectic fever; dry hacking cough; chronic diarrhœa; urine turbid on voiding, precipitating a white sediment on cooling; thin watery pus oozing from the diseased joint.

Rhus t., first and second stage; on pressure upon the trochanter pain in the hip-joint; pain in the knee predominant; swelling of the glands of the neck; crusty eruptions on face and head; after exposure to rain; worse in damp, cold weather.

Silic., in suppuration and caries of the bones anywhere, one of the most important remedies; pale, earthy complexion; loss of smell and taste; stoppage of the nose or acrid coryza; the parts upon which one lies easily go to sleep; any little sores or wounds are apt to fester; glandular swellings.

Stram., according to Dr. Jeanes, always indicated when the *left* hip is affected. I have given Stram. with great success wherever abscesses form, if attended with violent pain, driving one mad.

Sulphur, psoric individuals; frequent redness and inflammation of the eyelids; heat of the head, and cold hands and feet; frequent red spots in the face; is averse to being washed; morning diarrhœa, or constipation; sleepy in the day-time, and wakeful at night; easily perspiring.

Gonarthrocace, Tumor Albus Genu, *White Swelling of the Knee.*

Gonarthrocace, growing upon the same constitutional contamination as hip-joint disease, runs through nearly the same phases as that

disease, and is most frequently excited by an external injury, such as a fall, twist, or blow upon the knee.

At first there is a severe, dull, heavy, gnawing pain at the inner condyle of the femur, at the lower part of the patella, or at the inside of the head of the tibia; seldom at the outer part of the joint; it may be intermitting, and it may be continuous in its character, extending up and down the limb, and depriving the patient of all sleep and rest.

After a while the parts commence swelling, owing partly to interstitial deposits, and partly to an increase of synovial fluid. This swelling is at first most conspicuous in front and at the sides of the patella, effacing the normal depressions in that region, and replacing them by soft, fluctuating bags. "A similar prominence, often of great size, exists just above the joint, over the lower part of the femur, bounded inferiorly by the patella, and on each side by the lateral ligament, its anterior wall being formed by the tendon of the exterior muscle. Very little tumefaction ever occurs in the popliteal region, even in the more advanced stages of the disease. The skin is tense and glossy; the subcutaneous veins are abnormally large; the knee is stiff, if not immovable; and the leg, more or less flexed, is swollen and œdematous; while the thigh is remarkably atrophied. In proportion as the ligaments yield, the deformity of the joint increases, owing chiefly to the displacement of the head of the tibia, which allows the muscles to draw the leg outwards, so as to give it a twisted and contorted appearance. Occasionally, though rarely, there is an actual enlargement of the diseased bones. The fluctuation which constitutes so prominent a symptom in the earlier periods of this complaint often, in a great measure, if not entirely, disappears during its progress, owing to the adventitious deposits upon the synovial membrane, and the absorption of the redundant synovial fluid. Whenever this is the case, the swelling, instead of being soft and yielding, will be comparatively firm and resisting; but it still possesses some degree of elasticity, often so deceptive as to lead to the idea that the joint contains a good deal of fluid, and which nothing but the most careful examination can dispel." Gross.

Lastly, though not always, the involved structure commences to suppurate, and the matter may either be absorbed, or may escape at different places about the knee—very rarely though in the ham—forming numerous fistulous openings, and leading to caries and necrosis of large portions of the diseased bones.

Therapeutic Hints.

Aconite, after exposure to severe cold.

Arnica, after a fall or blow, and

Rhus t., after a twist, sprain, or strain, may severally be entirely sufficient to ward off all serious consequences.

Bellad., red, shining swelling, with throbbing pain, and enlarged blood-vessels along the limb.

Bryon., pale swelling, with stitching pain from slightest motion.

Arsen., third stage; discharge of fetid pus; œdema of the legs; hectic fever; sleeplessness; emaciation; exhaustion.

Calc. c., scrofulous individuals; too early and too profuse menstruation; pot-belliedness; looseness of the bowels; glandular swellings.

Jodium, second and third stage; fistulous openings, discharging a thin, watery ichor, and being surrounded by pale, spongy edges, which bleed easily; feverishness; emaciation. After the abuse of mercury.

Kali hydrojod., doughy, spongy swelling of the knee, without fluctuation; skin tense at times, red in spots, and hot. Inside, a feeling of heat; gnawing, boring pain at night, necessitating a constant change of position. After a fall.

Lach., Lycop., compare the preceding chapter.

Merc., after suppressed itch; nightly pains, &c.

Pulsat., fever, dryness of tongue, without thirst; diarrhœa; scanty and delaying menses.

Silic., violent, lancinating pains; caries; fistulous openings; cachectic condition.

Sulphur, psoric individuals. Besides, compare Coxarthrocace.

Podarthrocace, *Abscess of the Ankle-joint.*

Commencing with pain, this affection soon shows signs of a swelling just in front of each malleolus, filling up the hollow which naturally exists there. So also gradually disappear the grooves at the side of the tendo Achillis, and the whole joint swells quite considerably. By-and-by, if suppuration takes place, the pus may escape at different places, forming, like in the knee-joint disease, fistulous openings, and may lead to quite considerable caries and necrosis of the affected bones.

Therapeutic Hints.—Compare the preceding chapters. Only one remedy, not mentioned there, I must add here, namely:

Angustura. In a case where none of the very carefully-selected

remedies seemed to have any effect, this remedy at once did arrest the morbid process, and brought it to a perfect cure. In this case, the condyles of the tibia were quite seriously involved, and it was on account of a remark of Aegidy, "Angustura acts especially upon the long bones," that this remedy was given with so happy a result.

Tuberculosis may localize itself in still other joints; for example, in the different joints of the vertebræ, known under the name of SPONDYLARTHROCACE or SPONDYLOCACE or POTTS'S DISEASE; or in the shoulder-joint, causing OMARTHROCACE; or in the elbow-joint, giving rise to OLECRANARTHROCACE; or in the wrist-joint, causing CHIRARTHROCACE. As, however, these affections are of rare occurrence, as they consist entirely of the same nature as the above-described, differing merely in location, and as, in regard to therapeutic hints, I could not add many new things, I refer to the foregoing chapters.

NERVES.

Pathological organic changes in the nerves, as found in post-mortem examinations, comprise *inflammation*, *hypertrophy*, *atrophy* and *tumors* of the nerves or *neuroma*.

These conditions are, however, of a more anatomico-pathological than practical importance. We know little about their causes, and their symptoms are not so definite that we could build upon them a sure diagnosis. I shall, therefore, not enlarge upon this subject, but shall at once commence a consideration of *those forms of nervous diseases* which are groups of *certain symptoms of the nervous apparatus*.

As this apparatus consists of sensory and motory nerves, we shall have to consider two series of affections:

1. *Symptoms of sensory*, and, 2, *Symptoms of the motory nerves.*

I. Morbid Affections of the Sensory Nerves.

1. Hyperæsthesia, *Increased Sensibility, Morbid Sensitiveness, Nervousness.*

By means of the sensory nerves we receive external impressions. Light affects the optic, sound the auditory, perfume the olfactory, sapid substances the gustatory nerves, palpable things the nerves of touch, and heat, cold, &c., the nerves of general feeling.

These nerves are so constituted that they bear such external influences to a certain extent with perfect ease, although we find in even healthy individuals a great difference in this respect. Some perceive the slightest, others only more powerful influences; but, as a general rule, the ordinary influences of the outer world are borne by all with equal ease.

In this disease, however, it is often different. We observe that ordinary light, the slightest noise, the least touch, &c., are unbearable. This condition is called *morbid sensitiveness*. It is frequently in combination with a state of fidgetiness and restlessness, and then it is called *nervousness*.

Post-mortem examinations do not reveal the least alterations of the nerves, and its seat may just as well be referred to the primary faculties of the mind, of which the corresponding nerves are merely the bodily organs, by which the mind lies open to external influences.

Torpor of the sensory nerves is the opposite to morbid sensitiveness—a want of natural sensibility; to which we might add *numbness*, *pithiness*, either in consequence of pressure upon a nerve, or in consequence of central disturbances, by which its normal action is interfered with.

Therapeutic Hints.—Compare Boenninghausen's Repertorium.

Sensitiveness to light, (principally,) Acon., Arsen., Bell., Euphr., Merc., Rhus t., Sulph.

Sensitiveness to noise, Aurum, Coffea, Lyc., Sepia, Spigel.

Sensitiveness to smell, Aurum, Bell., Lyc., Merc., Phos., Sepia.

Sensitiveness to taste, Bell., China, Coffea.

Sensitiveness to touch, Arn., Bell., Coffea, Hepar, Lyc., Nux v., Puls., Sepia, Spig.

Nervous debility, China, Cocc., Nux v., Puls., Silic.

Fidgety disposition, Anac., Bell., Hyosc., Merc., Rhus t., Sepia, Staph., Stram.

Pithy, numb feeling, Cocc., Hyosc., Lyc., Oleand., Opium, Phos. ac., Stram.

2. Neuralgia.

Neuralgia literally means a pain of the nerves. In this sense of the word, any and every pain would be a neuralgia; because there is no pain possible without sensitive nerves.

This is not the sense in which the term *neuralgia* is used.

Hasse defines it in the following language: "Neuralgia characterizes itself physiologically as an irritation in the course of one or several sensory nerves, which irritation may exist on any part of the nerve from its origin down to its termination, and which irritation is felt as *pain;* not, however, only in the place where the irritation exists, but also in different other places of the same nerve; sometimes even through its whole length." Such irritation and consequent pain may be occasioned by the most different causes, so that neuralgia may be a symptom of very different conditions. Structural changes of the nerves themselves, however, are very rarely found, and then only in paralytic conditions. Those coarser structural changes which we have called tumors of the nerves, or neuroma, may exist without any neuralgia; and the most violent neuralgia may not show a trace of structural change on post-mortem examination. We cannot, therefore, so clearly define neuralgia pathologically as other forms of disease; as, indeed, it is only a symptom of the most different conditions.

Such conditions are either *peripherical* or *central.*

1. *Peripherical causes* are either organic changes of the nerves themselves—most frequently in consequence of external injuries—or organic changes in neighboring parts of the nerves, as inflammation, caries, and exostosis of the bones, especially in the neighborhood of the foramina, through which the nerves make their exit; also tumors —especially carcinoma and aneurysma—and affections of the liver, uterus, ovaries, kidneys, &c.

2. *Central causes* are structural changes in the brain and spinal cord, and their membranes; consisting of tumors, softening, sclerosis, and deposits of morbid products. Besides these causes we may also mention exposure to cold, metallic poisoning—especially by mercury and lead—and miasmatic influences, which latter cause a periodical type, like intermittents.

Symptoms.

1. *Pain.* It is of various kinds: boring, cutting, tearing, burning, like lightning; but always described as excruciating. It generally comes in paroxysms, and is felt in many cases distinctly running along the course of a certain nerve. It is often provoked or aggravated by softly touching or stroking the parts, whilst hard pressure frequently relieves it.

2. *Reflex symptoms.* They consist in affections of the *motory* nerves, causing spasmodic motions in those parts in which the affected sen-

sory nerve branches out, so prosopalgia almost always causes distortions of the face. The reflex upon the *vaso-motory nerves* manifests itself in paleness of the skin and chilly sensations, followed by heat and turgor, and sometimes profuse perspiration or profuse secretion of urine, or the latter may be scanty and saturated. In some cases we find the affected portion of the body constantly disposed to cutaneous eruptions, like pemphigus, urticaria, and zona.

The most important special forms of neuralgia are:

I. Cephalalgia, Migræna, *Nervous Sick Headache.*

This complaint, which is so frequently met with, returns periodically. It generally commences in the morning slightly, increases during the course of the day as the sun ascends, and reaches its culmination in the evening; very often it attacks only one side of the head, or passes from one side to the other, or is confined to the top of the head, or to the forehead or occiput. It often reaches an almost unbearable pitch, is associated with nausea, and generally ends with gagging and vomiting of bitter, greenish, or slimy masses. In some cases one thorough vomiting is sufficient to relieve the pain; whilst in others both retching and pain continue for several hours, until, finally, a sound sleep relieves it all. During the paroxysm the patient is very sensitive to light, noise, strong smells, and touch; he seeks a dark, quiet place where he can lie undisturbed.

Cephalalgia is most frequently met with in women of a hysteric, chlorotic, or anæmic tendency, and a weak and nervous constitution; also in married women who have no children, and in young widows. Men of weak constitution, who read and study much in the night, or who lead a loose life, are likewise subject to migræna. In all, it seems that the abuse of coffee and tea has a great deal to do with its periodical recurrence.

Therapeutic Hints.

Aethusa cyn., pressing pain in the forehead as though it would split; eyes appear protruded and the face is pale; great anxiety and restlessness drives into the open air, which relieves. At its height, vomiting, belching; hiccoughing; finally diarrhœic stool; some hours sleep and pain in the stomach for several days.

Aranea diad., when the spells come at regular hours; flimmering before the eyes; dizziness in the head, which obliges the patient to lie down; on rising a feeling as though the head and hands were bloated and swollen.

Argent. nitr., pressive pain in the forehead on getting awake in the morning, gradually extending from the supraorbital ridge upwards to the coronal suture, with heaviness in the head and vertigo, which does not turn in a circle, but inclines the patient to reel to the one or the other side; dimness before the eyes; ringing in the ears; sense of relaxation in the stomach, as though it were hanging down loosely; all the symptoms better after eating a good dinner and drinking a glass of wine; worse after drinking coffee; or the pain is *half-sided* in one of the frontal protuberances, or close to the side of the glabella near the supraorbital ridge, or in one of the temples, sometimes extending down into the bones of the face; the pain is of a pressive, screwing, throbbing nature, and is always preceded by general indisposition; chilliness; loss of appetite; growing dim before the eyes, and nausea. At its height it is attended with *trembling of the whole body* and a deadly nausea, which ends with vomiting.

Arnica, periodical spells, commencing in the morning slightly in the forehead, with flickering before the eyes, which is aggravated by reading or writing, gradually extending through the temples into the occiput, and reaching its acme in the afternoon. A warm room is unbearable, but the open air does not ameliorate; must lie perfectly quiet, stretched out upon his back; worse from any motion, quick walking, bending, going up stairs, talking, thinking, and after eating.

Arsen., hemicrania in persons with affections of the liver; alternating bilious colic and migræna; great sensitiveness of the head to the open air; during the spells the patient is very restless, constantly moves the head and limbs to and fro, and imagines that he gets some relief from so doing; better from external warmth; from wrapping the head up in warm cloths; he feels extremely prostrated; thinks he must die; feels chilly and hovers near the stove.

Bellad., one-sided pain, especially on the right side; throbbing, beating, attended with vertigo, congestion of the head and eyes, and throbbing of the carotid arteries; or great paleness of the face; pain worse on lying down.

Bryon., headache on first waking in the morning, gradually increasing until evening; pain as though the forehead would burst; worse from any motion, coughing, or sneezing. Tongue thickly coated; violent thirst or only dry feeling in the mouth; gastric derangement; constipation or diarrhœa in the morning; the patient is very irritable and cross; gets angry easily.

Cactus grand., pain in *right* temple by spells, brought on often by a glass of wine; by attending the opera; after getting his dinner at

too late an hour; it commences in the morning and grows as the day advances to an awful height, with vomiting. He must lie perfectly quiet; any attempt to keep up, any noise, light, or exertion increases the suffering terribly; constant dry nose.

Calc. c., chronic cases; after suppressed eruptions; strange feeling of coldness in some part of the head, or in the whole head; pain worse from early in the morning after getting awake until afternoon; sweaty hands and feet.

Camphora, throbbing pain like a hammer in the cerebellum, synchronous with the beats of the heart.

China, the pain is increased from slight touch; from opening the eyes; or from keeping them shut; sometimes the pain is relieved by lying down; at other times the patient cannot lie down; better while moving about gently. Nursing females after loss of vital fluids.

Chinin. sulph., intermittent neuralgia at regular hours.

Cocculus, the pain is worse after eating and drinking, and attended with a sense of emptiness and hollowness of the head.

Coffea, when the pain drives to despair and the patient runs wildly about the room.

Coloc., pain, tearing, and screwing together; great restlessness and anxiety, with sweat, which smells like urine; urine scanty and fetid; after chagrin and indigestion.

Ferrum, congestion of the brain; throbbing; crimson face, which, at other times is quite pale and earthy-looking. The pain drives one out of bed.

Glonoin, congestion of the brain; throbbing, pulsating pain from below upwards, with fulness and feeling of enlargement of the head; it feels like the motion of waves in the brain; congestion of the eyes; ringing in the ears; palpitation of the heart. During pregnancy, before the menses, or when the menses do not appear.

Ignatia, throbbing pain in the occiput, worse from pressing at stool; from smoking, from the smell of tobacco-smoke; for nervous subjects who get frightened easily, feel hurt easily, &c.

Laches., temporal nerves of one side painful, with throbbing in the temples; heat in the head; vertigo with paleness of the face; pain in the left ovarian region; bloatedness of the stomach.

Natr. mur., commencing in the morning when getting awake; it gets worse from reading, writing, and talking; and is frequently indicated when school-girls, who apply themselves closely to the learning of their lessons, get a severe headache.

Nux v., pressive, boring, dull pain, commencing in the morning, increasing through the day, growing milder in the evening, attended with dimness of sight, stoppage of the nose, sour and bitter vomiting; constipation; palpitation of the heart; worse from mental exertion, light, and noise; in the open air; after eating; brought on by masturbation; hysteria, with profuse menses; sedentary life; close mental application; abuse of coffee; hemorrhoidal disposition; constipation; disturbances in the ganglionic system.

Phos. ac., dreadful pain on the top of the head, as though the brain were crushed, after long-continued grief.

Platina, cramping pain, as though the part were in a vice, especially above the root of the nose, with heat and redness of the face, tearful disposition, and too early and profuse menstruation.

Pulsat., tearing, pressing, stitching pain, worse in the evening and at night; in the warm room; better from external pressure and in the open air, with aversion to eating and drinking; water tastes bitter; nausea; vomiting; oppression of the chest, and chilliness; mild, yielding disposition; scanty, delayed menses; disposition to looseness of the bowels.

Sanguinaria, the pain commences in the back part of the head, rises and spreads over the head, and settles especially above the right eye, with nausea, vomiting, and chilliness; the patient is obliged to seek a dark room and to lie perfectly still.

Sepia, the pain is jerking upwards, like an electric shock; or boring; worse from motion; better from holding the eyes shut; pale, yellowish, dirty color of the face; white tongue; aversion to food; sour taste after eating; constipation; leucorrhœa between the menses; bearing down in the womb.

Silic., throbbing pain in the occiput upwards, worse from every quick exertion, pressing to stool, &c.; better from getting warm, and after sleep; the pain is attended with a peculiar exaggeration of the mind; when crossed, he has to restrain himself from doing violence; appetite good; while eating the pain is much milder, but grows so much the worse again afterwards; brought on by exposure of the back to any slight draught.

Spigelia, different sorts of pains, frequently extending into the eye and side of the face, always worse from stooping, slightest motion, concussion, noise, and during stool; they are apt to appear at regular hours, either in the forenoon or in the night, and are mostly attended with paleness of the face.

Sulphur, pain in the forehead and top of the head; heat in the head

and coldness of the feet; flying heat in the face; nightly sleeplessness; itching of the skin; suppressed eruptions; looseness of the bowels early in the morning, driving one out of bed; hemorrhoids, &c.

Thuya, hemicrania of sycotic origin.

Veratr., pain very violent, driving one to despair; or prostrating, causing fainting; cold sweat and great thirst; great nausea, vomiting and diarrhœa, or obstinate constipation.

Zincum, in chronic cases of cerebral affections; great weakness of sight; stitching pain in the right eye; paleness of face; now and then vomiting.

2. Neuralgia of the Trigeminus, Prosopalgia, Neuralgia Facialis, Dolor Faciei Fothergillii, Tic douloureux.

It attacks one or the other branch of the trigeminus, sometimes the n. supraorbital or infraorbital, n. facialis, n. inframaxillaris; and, therefore, some authors speak of a neuralgia supraorbitalis, neuralgia infraorbitalis, &c. The affection is almost always confined to one side; rarely does it attack both sides, but there appears to be no difference in favor of one or the other side. An extension from one side to the other has been occasionally observed.

The pain is generally spoken of by the patient as indescribable, excruciating; coming on in paroxysms of shorter or longer duration; sometimes irradiating into the back part of the head and neck, down into the shoulder, intercostal spaces, breast, and even the lower extremities.

We likewise find the motory nerves affected, causing jerking of different muscles of the face, spasmodic closing of the eyelids, bending of the body double, trembling of the whole body, &c. We also find the vaso-motory nerves affected, causing pulsation of the arteries, swelling of the veins, redness, or paleness, and heat of the face. The whole affected side of the face assumes a different expression, becomes shining, glistening, greasy, sometimes appearing puffed, and at other times emaciated.

When the ramus ophthalmicus is affected, we observe a reddening of the conjunctiva and flowing of tears; if, at the same time, the second branch is also affected, we observe a watery and slimy discharge from the nose; and when the second and third branches suffer, it is often attended with a flow of saliva.

Sometimes there has been observed a partial sweat in the face

during the paroxysm; the hair of the affected side grows brittle, and splits, or falls out.

Therapeutic Hints.

Acon., cheeks red and hot; the patient seems beside himself for pain; screams and rolls about in the bed or on the floor.

Arg. nitr., during the paroxysms unpleasant, sour taste in the mouth. Wolf mentions Arg. nitr. as of general importance in this complaint.

Arsen., burning, stinging pain, as of red hot needles, worse about midnight; face pale and distorted; puffed around the eyes; great restlessness; ameliorated by external warmth; typic paroxysms of a miasmatic origin.

Bellad., cutting, tearing pain, shooting from the side of the face up into the temple, into the ear, and down into the nape of the neck; worse from touch and motion; hard pressure sometimes relieves; the paroxysms mostly occur in the afternoon; the face is generally flushed; the eyes water and the muscles of the face twitch; the patient cannot bear light nor noise; the right side is the most frequently affected; after the abuse of mercury.

Bismuth. nitr, the most excruciating pains are somewhat relieved by taking cold water in the mouth and walking briskly about.

Caust., right side, from the cheek-bone to the mastoid process, worse at night; chilliness; scanty menses.

Cham., the pain causes hot perspiration about the head, and extorts screams; the patient is wild and unruly, tossing and rolling about; menses usually profuse.

China, the pain is in the infra-orbital and maxillary nerves, worse from the least touch, lying down, and in the night; great weakness after the paroxysm.

Chinin. sulph., the paroxysms set in at the same hour every day; the intervals are free of pain, and there is no complication with gastric or other derangements.

Cimicifuga, especially when the neuralgia is a reflex-pain dependent upon ovarian disturbances.

Coloc., tensive tearing with heat and swelling, especially left side; motion and touch increase the pain; better in perfect rest, and from external application of warmth; brought on by chagrin and indignation.

Ferrum, during the paroxysms the face gets fiery red, sometimes

only in one spot; cannot keep the head quiet; at the intervals the face looks earthy and pale.

Gelsemin., orbital neuralgia in distinct paroxysms of acute pain, accompanied with contractions and twitching of the muscles near the portion of the face affected; with extreme general nervousness and loss of control over the voluntary muscles, giving rise to odd, irregular motions.

Hepar, in chronic cases; the pain streaks from the cheek-bone into the temple, ear, alæ nasi, and upper lip of the affected side; it is worse in the fresh air, and better from wrapping up the face; at the same time coryza, hoarseness, much sweating and rheumatic pains elsewhere; especially after the abuse of mercury or metallic preparations.

Iris, pain in the head, temples, and eyes, attended with most distressing vomiting of a sweetish mucus; and occasionally (if attended by much straining) with a trace of bile.

Lachesis, left side, orbital neuralgia; lachrymation; previous to the paroxysm rising of heat to the head; during the intervals a weak, nauseous feeling in the abdomen.

Mercurius, tearing pains, worse at night in bed; it often starts from a decayed tooth and involves the whole side of the face, which may be red and swollen; profuse secretion of saliva; constant inclination to perspire; restlessness and sleeplessness. Brought on by taking cold.

Mezer., boring, pressive pains, coming like lightning, which leave the parts numb; they are worse from eating warm food, also from entering a warm room after walking in the fresh air; they are attended with chilliness and shuddering; twitching of the muscles of the affected parts, flow of saliva, redness of the fauces, burning in the throat, stiffness of the masseters, red spots on the nape of the neck, and formication in the skin of the chest; after the abuse of mercury, or in syphilitic patients.

Natr. mur., pain in the molar bones, worse when chewing; falling off of the whiskers; intermittent prosopalgia; after the abuse of quinine.

Nux vom., tearing pain in the course of the infra-orbital and middle branch of the trigeminus, with redness and watering of the eye; flow of clear water from the nostril, and numbness of the affected side; the patient is morose, irritated, belches a great deal, and is constipated; after the abuse of coffee, liquors, quinine, &c.; also intermittent prosopalgia.

Phos., drawing and tearing pain in the jaws, root of the nose, eyes and temples, attended with bloatedness of the face, congestion of the head, tearing on the top of the head, vertigo, and ringing in the ears; from taking cold over the wash-tub.

Platina, boring pain, cramp-like; painful feeling of numbness in the molar bones and the mastoid processes and chin, as if the parts were between screws, attended with anxiety, weeping, and palpitation of the heart; profuse menses.

Pulsat., twitching, tearing pain, worse in the evening and in a warm room; in persons of a mild, tearful disposition, and phlegmatic temperament; inclination to looseness of the bowels; scanty menses; after getting the feet wet; after the abuse of quinine.

Rhus t., drawing, burning, tearing pain in the face, and a feeling as though the teeth were too long, attended with great restlessness, necessity to move about; relieved somewhat by the external application of cold; dysenteric stools, with jelly-like evacuations; after exposure to rain.

Sepia, intermittent prosopalgia, with congestion of eyes and head; also during pregnancy; jerking, like electric shocks, upwards.

Spigelia, tearing, shooting, jerking or burning pain in all directions, attended with dark redness of the affected side; flow of water from the eyes and nose; twitching of the muscles in the face; difficulty of breathing; palpitation of the heart; rheumatic pains elsewhere; worse in damp weather, from touch and motion.

Staphis., the pain starts from a decayed tooth; is worse from slight and better from heavy pressure; it is attended with swelling of the gums, cold sweat in the face, and cold hands.

Stram., prosopalgia, with many nervous symptoms: spasms of the chest hindering breathing, swooning, weeping, twitching of the muscles of the face; frowning; jerks through the whole body; delirious talk, with open eyes.

Sulphur, chronic cases, when other remedies relieve, but do not cure; psoric tendency; scanty, black, tarry menstrual discharges.

Thuya, after suppressed gonorrhœa or eczema on the ear.

Veratr., drawing, tearing pain, attended with bluish paleness of the face; sunken eyes; coldness of the extremities; trembling and jerking; cold perspiration; great exhaustion; nausea and vomiting.

Verbascum, violent pain, jerking, like lightning, or pressive numbing; brought on by pressure, sneezing, talking, chewing; appears at the same hour every day, and is attended with headache, redness of the face, vertigo, belching, and a discharge of tough saliva from the mouth.

Zincum, burning, quick stitches, and jerking along the course of the infraorbital nerve, right side, attended with bluish eyelids; numbness of the tongue; constricted sensation in the throat; worse from the slightest touch and in the evening.

3. Cervico-Occipital Neuralgia.

Its seat is the sensory fibres of the first four spinal nerves, chiefly only on one side, extending, therefore, over the upper part of the nape of the neck and the occiput, over the lateral region of the head and in front towards the lower jaw.

Compare Acon., Bell., Calc. c., Caust., Ign., Kalmia lat., Lach., Nux v., Puls., Spigel., Sulphur.

4. Cervico-Trachial Neuralgia

Extends over the whole trachial plexus, the shoulder and shoulder-blade, and down the arm.

Compare Acon., Arn., Ars., Ferr., Graph., Ign., Lyc., Phos., Rhus t., Sepia, Staphis., Sulph., Ver.

5. Intercostal Neuralgia

Has its seat in the dorsal nerves, and not unfrequently affects both sides of the chest, but most frequently the left side between the fifth and ninth intercostal spaces. There is a feeling of tension, as though the patient were tightly bound around the chest, and occasional shooting pains in the direction of the intercostal nerves are occasioned by taking a long breath, by coughing, sneezing, sighing, or certain motions of the body; by pressure of the clothing or a slight touch, which generally is relieved again by hard pressure.

There are certain localities where pressure upon regularly excites the pain. These are:

1. The region near the spinous process of the vertebræ, where the dorsal nerves emerge from the spine.
2. The middle portion of these nerves; and,
3. The region between the cartilages in front near the sternum and in the epigastrium.

Differential Diagnosis.

Pleurisy differs by its crepitating sound and fever.

Angina pectoris by its fits of suffocation.

Rheumatism of the muscles of the chest by its more general diffusion over the chest and its aggravation by slightest movement.

Compare Arnica, Arsen., Borax, Bryon., Calc. c., Carbo veg., Caust., China, Merc., Rhus t., Sepia, Spigel., Sulphur.

6. Lumbo-Abdominal Neuralgia

Has its seat in the lumbar nerves, and consists in pain in the lumbar region and on the abdomen, which is easily excited by raising a fold of the abdominal skin, or by touching it slightly, and by pressure upon the region near the lumbar vertebræ. Frequently we find associated with it a pain in different places of the crest of the ileum, and on the seat; and also pain which extends from the inguinal region to the symphysis pubis and down into the scrotum or into the labia majora, which are referrible to those superficial branches of the lumbar nerves which extend into these parts.

Compare Argent., Bell., China, Nux v., Puls., Rhus t., Spigel., Staphis., Sulphur.

7. Mastodynia, *Neuralgia of the Mammæ.*

Its seat is the mammary glands, which, at intervals, become very painful without any visible change of these organs.

In some cases, however, small tumors have been observed, which soon disappear again. The pain radiates sometimes into the axillæ, into the back and down into the hips, and may be attended even with vomiting. Lying on the affected side is impossible. It seems to be mostly connected with irregularities of menstruation, at which time it is most generally the worst. But also external pressure of these organs seems to have been the cause of it. Its most frequent occurrence seems to lie between the ages of sixteen and thirty.

Therapeutic Hints.—Painfulness of the mammæ during menstruation, Argent., Calad., Calc. c., Canth., Cimicifuga, Con., Kali c., Murex purp., Nitr. ac., Rhus t., Tabac.

8. Neuralgia ischiadica, Sciatica, Ischias postica, Malum Cotunnii.

Its seat is in the N. ischiadicus, though not always in its entire length. Most frequently we find the pain extending from the nates down the posterior part of the thigh to the bend of the knee, down along

the fibula to the external ankle, heel and external portion of the foot; sometimes the pain is felt only in the sole of the foot, (neuralgia plantaris,) and seldom in the dorsum of the foot and toes.

It may affect both extremities at the same time, but this is not usual. The pain generally commences mildly and gradually grows worse and worse; sometimes it is paroxysmal, generally worse towards evening and in the night. Slight touch aggravates or provokes the pain, whilst a hard pressure sometimes gives relief. With some, the pain is ameliorated by moving about constantly, whilst others cannot bear the slightest motion, so that coughing, sneezing, pressing at stool are almost killing operations to them. Sometimes the pain is attended with a cold sensation in the affected extremity, followed by heat. In other cases we find even reflex symptoms of the motory nerves, manifesting themselves as cramps in the calves of the legs and in the soles of the feet. It has even been observed, during the most violent paroxysms, that the heel was drawn up towards the buttock of the affected limb. In regard to its causes we are very much in the dark. Atmospheric influences, however, such as damp, cold weather, seem to be very apt to bring it on. Therefore we find amongst the exciting causes, getting wet, sleeping on the damp ground or within moist walls, or taking cold in general. Likewise are mentioned, a direct influence upon the nerves, as, pressure of narrow boots, wounds from blood-letting, carcinoma, aneurisms, pressure of the pregnant uterus, fœtal deliveries by the forceps, diseases of the vertebræ and neuroma.

Therapeutic Hints.

Arnica, when caused by over-exertion, marching, &c., with formication and lame feeling; necessity to change the position of the limbs constantly, because every thing upon which he lies seems too hard.

Arsen., the pain is attended with great restlessness, and is worse about midnight; brought on by staying in cold, damp cellars; it is somewhat relieved by external warm applications.

Bellad., feverish; inclined to weep; wants to sleep and cannot sleep; pain worse from touch and motion.

Bryon., better during rest, and worse on motion.

Cham., pain excruciating; the patient acts as if beside himself.

Calc. c., if caused by working in water; or in case of complication with affections of the spinal bones; the pain starts from the small of the back; extends down into the limbs and keeps them in constant uneasiness.

Cimicifuga, causes many reflex pains in different parts, dependent upon ovarian or uterine irritation.

Coffea, tearing, stitching pain, in irregular spells, worse in the night, with restlessness and sleeplessness.

Cocculus, pain, as if the hip were screwed together; or shooting pain, like lightning, down the whole limb; worse from motion; attended with cold extremities; chilliness with perspiration; chills alternating with heat; wretched complexion, sleeplessness; emaciation; after the pain, the parts affected feel numb, with formication and as if going to sleep.

Ferrum, remitting pains; worse in the night, driving him out of bed; although at first scarcely able to stand upon the affected limb, by continued motion and walking about, the pain gradually diminishes; pain in the left shoulder; the face is pale, emaciated, but flushes easily.

Gnaphalium, intense pain along the sciatic nerve, which is continued to its larger ramifications; feeling of numbness, occasionally taking the place of the sciatic pains, and then exercise on foot is excessively fatiguing.

Hepar, the pain is worse from motion, touch, and exposure to air; better from being wrapped up and keeping quiet.

Ignat., throbbing pain in the hip, as though the joint would burst; intermittent at first every other day—later daily; attended with chilliness and thirst, followed by heat without thirst; disappearing during the summer season, and in the winter reappearing.

Lachesis, pain constantly changing locality, now in the head, now in the teeth, now in the sciatic nerve; attended with nervousness; palpitation of the heart; burning like fire in the hypogastrium, lumbar region, and behind the sternum; flushes of heat; suppressed menses; constipation.

Ledum, laming pain in the hip-joint, worse in bed, when getting warm; the affected limb is cooler than the remainder of the body; general coldness and chilliness. The pain frequently commences below and ascends.

Lycop., pain in the hip, stiffness and weakness, and formication of the affected limb; cold feet; incarcerated flatulence and constipation; urine high colored, turbid, or depositing a red, sandy sediment.

Merc., drawing, tearing pain, worse at night in bed; restlessness; great inclination to sweat, without any relief.

Nux vom., the pain is drawing, tearing, from below upwards; con-

stipation; during stool, great pain along the affected limb down into the foot.

Plumbum, drawing, pressive pains in the sciatic nerve in the posterior part of the thigh, down to the knee, with difficult walking and great exhaustion after walking; tubercular diathesis, with dry, hacking cough.

Phytolacca, neuralgic pain on the outer side of the thigh; pressing and shooting, drawing and aching; worse from motion and pressure, and worse in the night.

Rhus t., the pain is attended with numbness, formication, paralytic stiffness of the affected limb; it is worse during rest, and when commencing to move; better from dry heat; it is mostly brought on by exposure to wet, by straining and lifting.

Sepia, during pregnancy, pain in paroxysms from three to five o'clock A. M., with considerable swelling of the veins of the affected limb; also in chronic cases, when the pain localizes itself in the heel of the affected limb; better during rest.

Sulphur, in chronic cases, when all other remedies seem to fail; after the suppression of tetters.

Tellur., worse when lying on the affected side.

Valeriana, the pain is unendurable whilst standing, with a feeling as if the thigh would break off.

9. Crural Neuralgia, Ischias Antica.

Its seat is the crural nerve; the pain is felt on the inner and lower portion of the thigh, on the inner portion of the knee, down the inner ankle, and on the inner portion of the foot to the big and second toe.

As causes, there have been named: uterine swellings, especially of a cancerous nature; inflammation of the hip-joints and crural hernia.

Therapeutic Hints.—Coffea, Phytolacca.

Compare Neuralgia Sciatica.

These are the most important forms of Neuralgia, belonging to morbid sensitiveness of the nerves. Now we shall have to consider their counterpart—a want of proper sensitiveness, which is called—

Anæsthesia.

Anæsthesia takes place from two causes:

1. Either from an *inability of the sensory nerves to convey* the external impressions to the central organs; or—

2. From an *inability of the central organs to perceive* external impressions.

The first is the case, for example, where a nerve has become cut through. Any irritation below that cut, towards the periphery, is not perceived any more by the central organs; that part may be pinched, burnt, &c., but it is not felt. The latter may have its source in a *disease of the spine* or *of the brain.* In both cases the want of feeling is chiefly associated with paralysis of the corresponding parts.

The degree of such anæsthesia varies from a mere numbness to torpor and deadness of the part. Its influence upon the vegetative functions in the affected parts shows itself as: decrease in natural warmth; slowness of capillary circulation; want of perspiration; subcutaneous œdema; livid color of the skin; brittleness of the nails; ecchymosis, and blisters filled with bloody serum, especially on the toes and fingers.

Of the different forms of this affection I shall mention only the following:

Anæsthesia of the Trigeminus.

According to the extent to which this nerve has lost its ability to convey external impressions to the sensorium, we find a want of feeling in the corresponding portions of the skin and mucous membranes. The patient does not feel any external irritation in these parts; when eating, knows not whether he holds any thing in the affected side of the mouth or not; the saliva runs out of the mouth without his knowledge; and the glass held on his lips seems to him broken off where it touches the affected side. In addition, there is likewise found weakness of sight, loss of smell and taste.

The reflex motions of the muscles of the face are gone, the eyelids do not shut when the conjunctiva is touched, and the patient does not sneeze when the mucous membrane of his nose is irritated. Also the voluntary muscular motions of the affected side are more torpid, and the pupil is contracted and immovable.

The seat of the affection is, according to Romberg's observations, more towards the periphery of the fifth pair of nerves, when the anæsthesia is limited to some of its fibres.

When, however, the anæsthesia affects not only the external surface of the face, but also the corresponding cavity of the eye, then the cause lies in one of the main *branches* of the trigeminus; either before or after its exit from the skull. When the anæsthesia extends over

the whole ramification of the trigeminus, the cause of the affection then lies in the *ganglion Gasseri* or immediately below it in the nerve.

When, however, the affection is combined with disturbances of other cranial nerves, its seat lies in the base of the brain. A central anæsthesia affects crosswise, and involves at the same time other sensory and motory nerves of the head and body.

Central causes are: apoplexy, softening, and tumors of the brain.

Peripheric causes: inflammation; softening; hardening and atrophy of the nerve and of the ganglion Gasseri. Likewise the severing of the nerve or of one of its branches by surgical operations, or other external injuries, blows, wounds, &c.; or pressure upon it in consequence of tumors or foreign bodies like musket balls, or fracture of the petrous portion of the parietal bone.

These causes show at once all that might be said about its prognosis and curability.

II. Morbid Affections of the Motory Nerves.

Just as the sensory nerves may be morbidly affected in a two-fold manner, either by an *increase* or a *loss* of their sensibility, so also are the morbid affections of the motory nerves of two kinds, either *spasm, cramp, hyperkinesis;* or *paralysis, akinesis*—that is, increased or lost contractility.

1. Spasm, Convulsion, Cramp, Hyperkinesis.

Spasms manifest themselves under different forms: 1. Either as short, slight jerks of certain muscles; or, 2. As violent, frequently-repeated contractions of the same or different sets of muscles; or, 3. As hasty motions; which, although regular, are deficient in purpose and rhythm or are automatically repeated; or, 4. As irregular, misdirected motions; or, 5. As trembling or tremor; or, 6. As a continuous rigidity of one or more sets of muscles, even of all muscles; and, 7. As a permanent contraction of certain muscles. Their violence and extent are very different, and do not always correspond to the importance of their cause. Grave disorders in the central organs may be attended with but slight spasms; whilst, *vice versa*, a slight reflex irritation may cause the most violent convulsions.

Their *causes* are various; I may mention as *predisposing ones*, the age of childhood—the younger the child, the greater the predisposition. Almost any acute disease may be attended by spasms at this age; and

frequently is preceded by them. Even in chills and fever, little children have spasms instead of a chill. As special forms of spasms in this early age I may mention *eclampsia* and *trismus*. In later years, up to the time of puberty, we find a predominating disposition to the different forms of *chorea; stammering* and *squinting;* and likewise the beginning of *epilepsy*. From the time of puberty to middle age we find *hysteria, epilepsy, eclampsia* and *tetanus*. In still later years we find *writing spasm,* and *tremor*. The female sex seems to be more disposed to spasms than the male.

As *exciting causes* we may reckon—

1. *Mental emotions:* fear, fright, anger, terror. Even the sight of convulsions has caused them in others. Epileptic fits have become endemic in this way amongst the pupils of a whole asylum.

2. *Diseases in the central organs* and their *membranes*, like apoplexy, softening, encephalitis, myelitis, tumors, tubercles, inflammation of the cerebral and spinal membranes, and morbid processes in those bones which encase the central organs.

3. *Peripheric irritations of the nervous system,* by strong light, tickling; also by wounds, blows and bruises of some organs like the testicles or the uterus, or by irritation of large surfaces like the mucous membranes—for example, the intestinal canal by indigestible food or worms, or the external skin by sudden taking cold, &c.

4. *Different conditions of the blood*, as, (according to Marshall Hall,) great loss of blood or stagnation of blood within the brain; so, also, various qualitative changes of the blood in exanthematic fevers, in pyæmia, uræmia and cholæmia.

5. *Certain poisons:* alcohol, narcotics, strychnine, secale, lead and mercury.

The *prognosis* of spasms depends entirely upon their causes. When they appear in consequence of organic lesions in the central organs, they are of a much graver nature than when in consequence of a mere peripheric irritation.

Spasms which appear during the beginning or during the course of other diseases, like exanthematic fevers, are a sign that the disease with which they are combined is of a violent character, but are not quite so bad a sign when they occur in children as in grown persons. Spasms from blood-poisoning in uræmia and cholæmia are always a bad prognostic sign.

I shall now speak of the different forms of—

Spasmodic Diseases.

I. Spasmus Facialis, *Mimic Spasm of the Face.*

It affects those muscles of the face which are supplied by the seventh pair of nerves, either on one or both sides; some or all of these nerves.

In its *clonic* form it causes the most awkward appearance of the face; whilst one side looks perfectly quiet and natural, the affected side is continually in motion, cutting all sorts of capers and jerks. The will has not the slightest influence over these distortions. They come on unprovoked, and may last a shorter or longer time. In some cases they are brought on by a usual effort to talk, chew, &c., disturbing these natural muscular actions greatly.

The *tonic* spasm is different. The face appears as though, during a distortion, it had suddenly become rigid, stiffened, so that it does not partake of the motions of the sound side, which manifests itself especially in laughing or whistling. This rigidity might give occasion to confound it with paralysis of the face. However, chin, lips and nose are drawn towards the affected side; the corner of the mouth of the affected side is drawn downwards, whilst the eyebrow is drawn upwards. The eyelids of the affected side cannot be perfectly closed, and the mouth not perfectly opened, thus interfering with talking and chewing. The muscles of the affected side are hard to the touch, and the patient has a feeling as if they were stretched.

As the most frequent *cause* of this complaint, may be mentioned: *suddenly taking cold* by exposure to a sharp, piercing wind, rain or snow driven into the face. Likewise external injuries, especially bruises of the bones of the face and skull, decayed teeth, &c. Violent mental emotions, like anger or terror and hysteric conditions, have also been observed as causes of this complaint.

Therapeutic Hints.

When caused by exposure to cold, compare Bell., Hyosc., Merc.

When caused by external injuries, Arn., Hypericum.

When caused by diseases of the bones, decayed teeth, Hepar, Merc., Silic.

When caused by anger, Nux vom.

When caused by fright and terror, Hyosc., Ign., Opium.

Constant winking of the eyelids, Anac., Bell., Stram.

Risus sardonicus, compare Acon., Anac., Alum., Asa, Bell., Bovista, Calc. c., Cicuta, Con., Croc., Cupr., Hyosc., Natr. mur., Nux mosch., Phos., Plat., Ran. scel., Sepia., Stram., Veratr., Zinc.

2. Mogigraphia, *Writing-Spasm.*

It commences first as a mere tired feeling of the hand, after long-continued writing. By-and-by this feeling increases, and the writer has to make pauses frequently in order to rest the hand; lastly, it is quite impossible to hold the pen and to write, because, 1st, either a spasm of the extensors draws the fingers asunder, or, 2d, a spasm of the flexors of the first three fingers, or only one of them, makes it impossible to hold the pen. Such spasms may be clonic or tonic. Sometimes the thumb and fingers are only slightly drawn together, and writing might be possible, if it were not for the strong trembling which attacks the hand and the whole arm up to the shoulder, as soon as writing is attempted.

If writing be attempted with the other hand, it is not long before the same spasms attack it also.

It is quite remarkable that all other motions and performances with the hand can be easily executed, although in some cases similar spasms and tremor have been observed to attend other performances.

Similar spasmodic actions have also been observed in other habitual muscular actions; for example, shoemaking, milking, playing different musical instruments, setting types, sewing, &c. Its *causes* seem to be over-exertion in writing, or a peculiar irritability of the muscular fibres as a predisposition. It is increased by anxiety, and constant thinking of it.

The most important remedies are, Stannum, Secale, Nux v. Light and large penholders ought to be used. agar

Chorea, *St. Vitus' Dance.*

This affection consists in a spasmodic involuntary agitation of single or several groups of muscles, hindering and interfering with the performance of regular voluntary movements. Exertions of the will, to prevent these involuntary motions, only increase their violence; but they usually abate during sleep.

Symptoms.

1. *Involuntary motions* sometimes extend to all the muscles which obey the will; sometimes they are confined to certain groups of them; oftenest to the upper half of the body; sometimes only one side is agitated, and in exceptional cases we find a crosswise agitation—an arm of the one, and the leg of the other side. Again, in-

voluntary motions sometimes commence in a few muscles only, gradually extending over the whole side, and finally to the muscles of the whole body. We then find the whole body in constant agitation; jerking, twisting, swinging, a ludicrous and sometimes pitiful sight. There is no interruption of these irregular motions, except during sleep, which is generally restless and unrefreshing; and even then they recur, although in a less degree, when the patient dreams. Waking up and returning consciousness restores them to full power again.

Intercurrent diseases have, in a few instances, cured the complaint; but very frequently are followed by no good effect. Fever almost always increases the trouble.

2. The *regular voluntary movements* of the body are thus much interfered with, and at last cannot be executed at all. Dressing, writing, and playing instruments become impossible, talking difficult, and exertions to overcome the difficulty have always had the contrary effect—increase of spasmodic action.

3. *The reflex motions,* however, are not disturbed. If the patient itches somewhere, he can scratch himself without any trouble; so can he sneeze, cough, and evacuate bladder and bowels, &c.

4. *All other involuntary motions of the body* are perfectly free in their action; there is no interference in breathing, in the pulsations of the heart, nor in the act of swallowing; and the peristaltic motions of the intestines are normal.

5. *The sensibility* is in most cases normal.

6. *The mental functions,* however, suffer considerably from a long duration of the disease. The patient at length shows a loss of memory, weakness of mental capacity, and in some severe cases even imbecility of mind; the disposition becomes fretful, irritable and peevish.

Its *predisposing cause* seems to be the age between the time of second dentition and puberty.

As *exciting causes* are mentioned: *mental emotions,* like fright, fear, &c.; *debilitated states* of the system after diseases; growing too rapidly; suppression of cutaneous eruptions. A specific cause is not known.

Therapeutic Hints.

Agaricus, the spasmodic motions range from simple involuntary motions and jerks of different muscles to a dancing-like turning of the whole body; frequent nictitation of the eyelids; redness of the

inner canthus of the eyes; flow of tears from the eyes; sensitiveness of the lumbar vertebræ; worse during the approach of a thunder-storm.

Bellad., throwing the body forward and backward in lying, a kind of constant changing from emprosthotonus to opisthotonus; boring the head into the cushion; grating of the teeth; sore throat; numbness in the fingers; soreness of the last lumbar and the first dorsal vertebræ; after mental excitement.

Calc. c., sometimes only one-sided involuntary motions; sometimes amounting to falling down; period of second teething; worm symptoms; scrofulous habit; onanism.

Caulophyllum, in young girls with menstrual irregularities.

Caust., distortion, twisting and jerking of the limbs, even in the night, preventing sleep; paralysis of the tongue and the right side of the body.

Gross mentions a peculiar case of a young girl, who had the following paroxysms: the child laid down on her stomach, when one of her knees was firmly inserted into the hollow of the other knee, and her feet drawn upwards upon the buttocks. In this position her body commenced jerking forward and backward, simulating the movements which are exercised during coition; at the same time the muscles of her face became contorted, similar to risus sardonicus. After the attack the child would be exhausted; but during the intervals she showed no particular symptoms; the spells were worst in the morning. Cured by Causticum.

Cimicifuga, chiefly on the left side only; worse during the menstrual period; from rheumatic irritation.

Cina, the distortions often commence with a shriek, extend to the tongue, œsophagus and larynx, and continue even through the night; they are attended with frontal headache; enlarged pupils; dark rings around the eyes; itching of the nose; pale, yellowish, earthy face; ravenous appetite; pain around the umbilicus; hard stools; turbid urine; emaciation; all pointing to irritation of the intestines by worms.

Cocculus, involuntary motions with the *right arm* and *right leg;* they cease during sleep; face puffed, somewhat bluish; hands look as if frozen; paralytic symptoms.

Crocus, jerking in the muscles; spasmodic contractions of single sets of muscles; jumping, dancing, laughing, whistling; wants to kiss everybody; congestion of the head with bleeding of the nose; suppressed menses.

Cuprum, commences in one arm and spreads over the whole body, causing the most terrible contortions and awkward movements; inability to speak, or only imperfectly; after fright.

Hyosc., throwing about of the arms; misses what he reaches for; constant falling of the head from side to side; tottering gait; very talkative, or loss of speech; laughs at every thing that is told him; smiling, silly expression of countenance; after typhus.

Ignatia, especially when caused by fright or other mental excitement; worse after eating; better when lying on the back.

Laurocerasus, she tears her clothing; strikes at every thing; spasmodic deglutition; indistinct articulation; she gets angry because she cannot be understood; idiotic expression of the face; cold, clammy feet up to the knees; she can neither stand nor sit, nor lie down, on account of the incessant motion; wasting away; after fright.

Natr. mur., chronic cases after fright or suppression of eruptions on the face; worse during full moon; paroxysms of jumping high up without taking notice of the things around him, thus hurting sometimes himself considerably; or mere jerkings of the right side and of the head.

Nux vom., when attended with a feeling of numbness in the affected parts; also after much drugging.

Phosph., he walks like one paralytic, without noticing it himself; twitching of the limbs; great exhaustion; after Calc. c.; during second dentition; in general, during that period in which the body is growing.

Secale, the morbid contractions usually commence in some muscles of the face and spread thence over the whole body, and increase even to dancing and jumping motions.

Sepia, convulsive motions of the head and limbs; when talking, (which is only a stammering,) jerking of the muscles of the face; general muscular agitation; desire to constantly change position and place; ringworm-like eruptions on the skin every spring.

Sticta, she cannot keep her feet to the ground; they jump and dance around in spite of her, unless held fast; when lying down, her limbs feel as though they were floating in the air as light as feathers.

Stramon., the convulsive motions are often crosswise, or violent all over; preceded by formication in the limbs and a melancholy mood; worse during the equinoxes; inclination to pray; loss of memory; stammering; loss of speech; putting the hands to the genitals.

Sulphur, in chronic cases; after suppressed eruptions.

Veratrum viride, most violent distortions of the body, universal, un-

affected by sleep; lips embossed with foam; waked up by a continual champing of the teeth; inability to swallow; intense sexual excitement.

Zincum, especially in those cases in which the general health suffers much from the disease, with great depression of spirits.

Trismus and Tetanus

Are characterized as tonic contractions of the voluntary muscular fibres, alternating with convulsive concussions of these muscles. It is seldom that the disease is at once fully developed. Several days before its outbreak, chilly sensations are occasionally felt, and even shaking chills; and a kind of aura-like pains from an injured or affected part of the body. There are at first drawing pains in the neck and stiffness in the nape of the neck, with some difficulty of swallowing. These symptoms increase; the head becomes immovable and drawn backwards; the masseter muscles become rigid; the lower jaw becomes set, and swallowing still more difficult, and even impossible.

This state of things is called *trismus* or *lock-jaw;* if it end here so much the better; but frequently this tonic spasm extends further, even over all the dorsal muscles, down to the os sacrum, and over the muscles of the chest and abdomen; so that the whole body becomes as hard and rigid as a piece of wood. Not quite so severely affected are the muscles of the extremities, and sometimes not all. The muscles of the face are likewise less severely handled; but still they participate more or less. There is a peculiar tension and painful expression in them. The eyeballs are rigidly drawn towards the inner canthus, and during the convulsive exacerbations the forehead becomes corrugated; the eyebrows frown, the eyes stare, the lips are drawn asunder, showing the teeth; the tongue is thrust between the teeth, and frequently severely bitten. There is often risus sardonicus. *This is tetanus.*

This general tonic spasm of the voluntary muscles, however, has its remissions; that is, the rigidity of the muscles yields occasionally to a more relaxed state, until either without any external cause, or by some external influence *under a sudden general convulsive concussion,* the highest degree of rigidity again sets in. Sometimes these recurring concussive jerks are so violent that the patient is thrown backwards and forwards; whilst in other cases they resemble only electric shocks. In this way the disease progresses, alternating with rigidity, partial relaxation, and convulsive concussions. The contractions are

so violent that in most of the cases single bundles of muscular fibres are torn and extravasation of blood takes place. The following forms of these spasms have been recognized: *Opisthotonus*, a bending of the body backwards, even to such a degree that the patient lies upon his heels and the back of his head; *Emprosthotonus*, a bending of the body forwards; *Pleurothotonus*, a bending of the body sideways; and *Orthotonus*, a being stretched out straight. The most frequent form is opisthotonus; which has its cause, no doubt, in the predominating affection of the dorsal muscles. All other forms are quite exceptional.

As long as the spasm prevails, the *will* has not the slightest influence over the muscles. On the contrary, any effort of the will only increases the rigidity of the muscles; and likewise do all reflex irritations; so that, as is well known, even the slightest touch, movement of the bed, or even draught of air, is sufficient instantly to cause *the most violent convulsive concussions.*

The respiratory action is, of course, greatly interfered with, inasmuch as all the thoracic muscles are involved in the affection; and the breathing, it seems, goes on chiefly by means of the diaphragm. Where the remissions are of only short duration, we find dyspnœa; the skin becomes livid and covered with sweat; sometimes even resulting in entire cessation of breathing, and death.

Tetanus is always attended with a great deal of pain; not only in those convulsed and contracted portions of the body, but also in the pit of the stomach.

Much less affected are the circulating and digestive apparatus. The pulse is, in some cases, even normal; in most cases, however, it is frequent.

Vomiting and singultus may or may not be present; while constipation and retention of urine are frequent attendants upon these spasms.

The skin is generally hot and covered with perspiration, as in violent muscular exertions, and is followed by a miliary eruption.

The functions of the brain seem entirely unmolested; the patient has to suffer all these tortures in full consciousness.

Sleep is entirely absent, and if the patient loses himself for a moment in consequence of exhaustion, he is at once aroused again by violent concussions. This is the character of all kinds of tetanus.

Trismus or Tetanus neonatorum presents, on the whole, the same features; commencing at first with stiffness of the jaws and difficulty of deglutition, so that the child becomes incapable of taking

the breast, gradually extending over all the muscles of the body, making them rigid and hard.

Trismus and tetanus frequently terminate fatally, and may last from twenty-four hours to several weeks. If recovery takes place, it goes on very slowly, and may take a good while. Death ensues in consequence of suffocation—all the respiratory muscles ceasing to act—or in consequence of exhaustion.

Causes.

1. *External injuries of peripheric nerves* of the extremities, face, and genitals; likewise parturition and abortus.

In new-born children, inflammation of the navel.

2. *Rheumatism* in consequence of severe cold. Taking cold, next to external injuries, seems the most frequent cause.

3. *Lesions of inner organs:* injuries of the uterus, pleuritis, and hepatization of the lung.

4. *Central irritations,* concussions of the spine; hyperæmia of the cord and its membranes; extravasations within the spinal canal and the skull.

5. *Poisoning by strychnine* or *brucine.*

Therapeutic Hints.

Aconit., trismus and tetanus; contorted eyes; face changing color, now red, now pale again.

Angust., opisthotonus from external injury.

Bell., at the commencement, when there is: restlessness; sudden jerks and shrieks during sleep; twitching of the muscles of the face and limbs; squinting; inability to swallow; later: convulsive motions; spasmodic respiration; dilated pupils; staring, open eyes; involuntary discharges from the bowels and bladder.

Camphora, antidote to strychnine. /X, 2 & 3 dosis (James)

Cicuta, becoming suddenly stiff and immovable; tetanic stiffness of the whole body; opisthotonus; face puffed and bluish; eyes fixed, staring at one point; foam before the mouth; spasm of the chest, afterwards trembling; cannot recollect; the spasms are renewed from slightest touch, even from opening the door, and from loud talking.

Lycop., drawing of the head towards the right side, with stiffness of the neck, face and jaw; dizziness; heaviness in the head; weak eyes; dry and stuffed-up nose; dry, difficult stool; restless sleep; full of anxious dreams; much depressed in spirits.

Moschus, stiffness of the body, with full consciousness; spasms in the abdominal muscles.

Nux vom., intermitting fits of spasm; disturbed respiration; consciousness not disturbed; renewal of spasms from slightest reflex-irritation.

Phytolacca has caused the following symptoms: extremities stiff; hands firmly shut; feet extended and toes flexed; eyes bleared and dancing; pupils contracted; teeth clenched; lips everted and firm; general muscular rigidity; opisthotonus; respiration difficult and oppressed; convulsive action of the muscles of the face and neck, followed by partial relaxation, which again was succeeded by the same tetanic condition.

Platina, opisthotonus changing with spasms, with full consciousness; profuse menses; overbearing, proud disposition.

Rhus t., in consequence of taking cold by getting wet.

Secale, after abortus, spasms with full consciousness, afterwards great exhaustion; heaviness in the head and tingling in the legs.

Stram., opisthotonus and trismus, with congestion to the head; red face; heat of the body; too profuse urine; deep, snoring sleep.

Veratr. vir., opisthotonus.

Catalepsy

Is a sudden loss of all voluntary motory power, so quickly befalling all muscles that the different parts of the body remain precisely in the same position in which the attack finds them, thus making the patient appear like a statue. At first the muscles are rather rigid; but they gradually grow more pliant, assume a waxy flexibility, so that the limbs may be brought into any position, in which they continue to remain. The sensibility and consciousness of the patient is usually gone; he perceives nothing and recollects nothing; whilst in other cases some sensibility seems to remain; and in still others, sensibility and consciousness are entirely undisturbed. The patient sees, hears and knows every thing that is going on around him, but is perfectly unable voluntarily to move a single muscle of his body; the link which makes the body an instrument of the soul seems broken. Such fits end in simple forms of the disease often quite as sudden as they come on. The patient draws a long breath, sighs, yawns, and acts as though he was waking out of a deep sleep, and goes on with his interrupted work without even suspecting that any thing has happened to him. Such attacks sometimes follow others in short intervals, and they may last only a few minutes at a time. Graver attacks last hours and days. Skoda mentions one that lasted several months.

Cataleptic spells are frequently combined with hysteria, melancholy, ecstasy, St. Vitus' dance, somnambulism, and other nervous derangements. The disease is of rare occurrence, and its real exciting causes seem to be mental agitation, anger, fright, sudden joy or fear, grief, disappointment, vexation, ecstasy, or religious excitements, &c.

Catalepsy is, by itself, not fatal.

Therapeutic Hints.

If caused by anger and vexation, Cham., Bryon.
If caused by fright, Acon., Bell., Ign., Gels., Op.
If caused by sudden joy, Coffea.
If caused by grief, Ignat., Phos. ac.
If caused by jealousy, Hyosc., Lach.
If caused by sexual erethism, Plat., Stram.
If caused by disappointed love, Ignat., Lach.
If caused by religious excitement, Stram., Sulph. and Veratr.

Epilepsy, *Morbus Sacer.*

To give a definition of this affection, I might say: epilepsy is a chronic form of fits, which occur repeatedly, but without any typical regularity; and which are characterized by loss of sensibility and consciousness, and are attended with clonic spasms. The intervals between these fits are at first free from any morbid affections; later, however, they are more or less disturbed by different brain-symptoms.

Symptoms.

Single attacks are in some cases preceded by headache, dizziness, sparks before the eyes, noises in the ears, bad smell in the nose, trembling, nausea, urging to empty the bowels and the bladder, chilliness, palpitation of the heart, dyspnœa, soreness in the hypochondriac and epigastric regions.

The so called *aura*, which means a sensation as though, immediately before the attack breaks out, cool air were passing quickly up the extremities towards the head, is either of quite rare occurrence, or passes off so quickly that the patient does not remember it after the attack is over.

The fit itself, which, in most cases, sets in without any premonitory signs, often commences with—

1. *A shrill, piercing shriek;* in children some have observed *tears* instead of a shriek.

2. At the same time the patient falls suddenly and violently to the ground, deprived of all consciousness.

3. *Convulsions,* partially *tonic,* partially *clonic,* sometimes alternating. In rare cases these spasms are so violent that they cause fractures of bones and luxations of joints. Oftener the teeth are broken by the violent contraction, and the tongue becomes seriously bitten. Ecchymosis, blood-extravasations in the skin, and especially in the conjunctiva, are often found; less frequently, however, extravasations of blood within the brain and its membranes.

4. The respiration becomes disturbed, as, no doubt, the spasms extend over the respiratory muscles. In consequence of this we see symptoms of asphyxia and cyanosis: namely, swelling of the veins of the neck, protusion of the injected eyes, blueness and swelling of the face, tongue, and extremities.

5. The pulse is at first small and hard, later it becomes more frequent; it is seldom irregular or slow, except in coexisting diseases of the brain.

6. The alimentary canal exhibits the following symptoms: The saliva flows from the mouth or is blown out, causing *foam before the mouth,* often bloody; the patient swallows air, which causes rumbling in the bowels, distention of the abdomen, and passages of flatus, and sometimes feces.

7. The urine passes off involuntarily; in some cases there are erections of the penis, and even ejaculations of semen.

8. We frequently find the patient in a general perspiration.

This convulsive state lasts about two or three minutes, and then follows:

9. *Relaxation.* Gradually the breathing, the pulse, and the features regain their normal state; finally the patient awakes with a deep sigh, not knowing what has happened to him. After this he usually falls into a disturbed sleep, with moaning and restless motions of the limbs; or he stays awake and continues his work in which he had just been interrupted. In some cases follow delirium, excitement and violent agitation, until full consciousness returns.

I shall here subjoin what French physicians have put down as characteristic of epilepsy: 1. Shriek; falling to the ground; deadly paleness; tonic spasms, lasting one-quarter of a minute to one minute. 2. Redness of the face; convulsions; insensibility, one and a-half to two minutes. 3. Gradual subsiding of the convulsions, three to eight minutes.

The intensity of the paroxysms varies greatly. It may consist in a

mere so-called epileptic vertigo, when neither a shriek, nor falling down, nor clonic spasms, are observed, but only a quickly-passing unconsciousness, a staggering, perhaps, and a short tremor through the body. If it happens during sleep it may pass over entirely unnoticed. But even such light attacks leave the patient weak, drowsy, and low-spirited for a while. Others set in slowly with marked premonitory symptoms, and develop themselves sometimes only partially, and sometimes wholly, so that they form mild and hard attacks; whilst others show all the violence above described.

Their frequency is likewise very variable—from more than one hundred in twenty-four hours, to only one or two in a year. They do not keep regular time, but they most frequently recur after an interval of from twenty-five to forty-five days. They may happen at any hour of the day or night.

Symptoms during the free intervals. Although in recent cases the patient shows scarcely any morbid change, yet, by-and-by, the disease brings on marked changes in the affected individual. The patient is low-spirited, morose, has no inclination to work, or he becomes excited, easily angry and does things wrongly. By-and-by he becomes forgetful, stupid, greedy, voracious, lewd, unmanageable, and correspondingly his features assume a stupid, sad, and wild expression. The face is generally pale and puffed, looking old, and more or less distorted. The teeth are ground down or broken off; the tongue lacerated and cicatrized; the limbs are weak, emaciated and tremble easily. All these symptoms, of course, develop themselves only gradually.

The *cause* of this disease is always of a chronic nature, and may last through the whole life. It may commence with light attacks, which gradually grow stronger, or the attacks may retain their character in strength from first to last.

In little children the attacks seem more frequent; less frequent after the tenth year, and more frequent again about the time of puberty. Sometimes, however, they become less frequent at that time. Excessive sexual excitement has a decidedly bad influence. Intercurrent diseases, however, generally check the frequency of the spells.

The disease frequently terminates in apoplexy, softening of the brain, paralysis, mania, and imbecility of mind.

Causes.—There seems to be no doubt that the disease is propagated by *inheritance.* As occasional causes there have been observed:

1. *Mental emotions,* fright, fear, &c.; 2. *Morbid changes within the brain and its membranes;* 3. *Peripheric irritations of sensory nerves,* which consist either in morbid states of these nerves, or in morbid states of

those organs to which these nerves are distributed, or in a mere undue functional irritation of these nerves.

In a given case it may be very difficult to define which of these is *the* cause.

In regard to *differential diagnosis,* I shall here mention only its simulation. However closely it may be simulated, the impostor cannot prevent his pupils from contracting when strong light falls upon them; in epilepsy light has no effect upon the pupils.

Prognosis.—As *bad* signs are to be reckoned: attacks which come in irregular groups; great frequency of the paroxysms; sudden attacks without any premonitory symptoms; vomiting, asphyxia, half-sided convulsions, with subsequent paralytic symptoms; long-continued coma, delirium, mania, stupidity after waking up.

More *favorable* signs: short attacks and long intervals between; premonitory symptoms before the attack; milder convulsions, with little embarrassment in respiration; brief or only partial loss of consciousness, and no disturbance of the health in the intervals. Still better is it, when the paroxysms become less frequent, shorter and milder. The outbreak of cutaneous eruptions and ulcers is quite favorable. In regard to *causes,* we find it unfavorable when the disease is inherited, or is not cured during the age of puberty, or comes on in middle life, or is caused by disorganization of the brain or by continued peripheric irritations of the nervous system, like masturbation. More favorable are those cases which come on during the period of dentition, or are caused by disturbances in the nutritive functions, as chlorosis, anæmia, lead or alcoholic poisoning; in fact, in all such cases where it is possible to remove the cause.

Therapeutic Hints.

Agaricus, nictitation of the eyelids; itching, burning and redness of the fingers and toes, as though they had been frozen.

Arsen., *preceded* by a sense of warm air streaming up the spine into the head; vertigo; loss of consciousness and falling down. *Afterwards* confused and stunned. *During the intervals,* pressive pain in the occiput; burning in the spine; sweet taste in the morning; after eating heavy food burning in the stomach and bowels; stool irregular, mostly diarrhœic, with burning in the anus; also burning in the glans penis during micturition; frequent cramps in the calves of the legs.

Artemisia vulgaris, when there are a number of attacks right after each other.

Bell., the convulsions commence in the arm; previous, and at the

time, congestion of the head; *during the intervals*, peevish, angry, scolding, swearing; or fearful and full of anxiety; vertigo; growing dark before the eyes; ringing in the ears; headache, with twitching in the face; flushes of heat in the face; red face; enlarged pupils; jerking and starting in sleep.

Bufo, after fright.

Calc. arsenica, pain and oppression in the region of the heart before the fit.

Calc. c., *before the attack:* chewing motion with the mouth; stretching of the limbs; great restlessness; palpitation of the heart; sense of something running in the arm, or from the pit of the stomach down through the abdomen into the feet. *After the attack:* headache; dizziness; sweat on the head; great thirst; canine hunger; vomiting and diarrhœa. *During the intervals:* stupid, peevish; anxious about getting well; vertigo; headache before breakfast; pale, puffed face; perspires easily, especially on the head; hardness of hearing; eats a great deal and yet loses flesh; thick, swollen belly; too frequent and too profuse menses; swelling of the glands about the neck. *Causes:* fright; protracted intermittent; suppression of chronic eruption. Worse during the solstice, and full moon; excited by chagrin or fear; by drinking cold water; by letting the legs swing when sitting. Frequently indicated after sulphur.

Caulophyllum, epileptiform spasms during or near the menses.

Caust., *before the attack:* imbecility of mind; heat of the head, followed by sweat all over; great pressure in the pit of the stomach, extending all over the chest and hindering breathing.

During the spell: sometimes bleeding of the nose; very red face; biting of the tongue. *Afterwards:* soporous condition; headache; noise in the head; exhaustion. *During the intervals:* on the scalp and glabella small, round, soft lumps; sweats easily on the head; stoppage of the nose; *tongue coated on both sides white;* sour or sweetish, badly-tasting eructation, like ink, or rotten wood; pain in the small of the back, and constant coldness of the shoulders and joints of the feet; great restlessness, which urges him to run away. *Causes:* suppressed itch; protracted intermittent; softening of the brain. Worse during new moon; drinking cold water as soon as the pressure in the stomach commences prevents the attack.

Cicuta, epileptiform spasms from venous congestions of the abdomen in children and women. Bluish, puffed face; eyes staring upon one point; electric shocks; trembling; difficulty of being roused from sleep; small, painful ulcers on the edges of the tongue.

Cimicifuga, epileptiform spasms at or near the menstrual period.

Cocculus, for women of great nervous and paralytic weakness, with suppressed or very painful menstruation.

Cuprum, *before the attack:* nausea, retching, and throwing up of phlegm; bloated abdomen; drawing sensation in the left arm; aura epileptica; the arm is drawn involuntarily close to the body; formication and tearing in the right hand; shuddering; goose-flesh; palpitation of the heart; or sudden shriek and falling down, without any premonitory signs. *During the spell:* the fingers become dead; involuntary discharge of urine; bluish color of the pit of the stomach and chest; chest and head covered with perspiration. *After the spell:* weeping; headache; profuse discharge of a clear watery urine; long trembling and shaking of the right hand; sleep. *During the intervals:* anxiety, tendency to be frightened; burning in the chest and abdomen, with chilliness of the remainder of the body; burning and tearing in the small of the back; numbness of the arms. In clearly idiopathic cases, with no organic lesions; worse about new moon; after mental excitement.

Digitalis, when caused by excessive nightly emissions or onanism, with great weakness of the genital organs.

Gelsem., epileptiform convulsions after suppressed menses, with severe spasm of the glottis; epilepsy, with dull feeling in the forehead and vertex, and some pain and fulness in the region of the medulla oblongata before the attack.

Glonoin, great congestion of the head and heart; during the spasms he spreads his fingers and toes asunder.

Hyosc., before the attack: vertigo; sparks before the eyes; ringing in the ears; gnawing and sensation of hunger in the pit of the stomach. *During the spell:* purple, bluish face; projecting eyes; shrieks; grating of teeth; foaming; discharge of urine. *After the spell:* soporous condition, snoring. *During the intervals:* tearing and beating in the right eye, which weeps and seems projected; constipation. Causes: jealousy; disappointed love; grief. The attempt to swallow fluids renews the attack.

Hypericum, epileptiform spasms, always after knocking the body against any thing.

Ignatia, epilepsy caused by fright and suppressed grief; and especially suitable for children.

Ipecac., epileptiform spasms, with shrieks; opisthotonus; pale, puffed face, and gastric derangements.

Lachesis, in those cases which are caused by onanism, or are in

connection with a morbid excitement of the sexual organs; fluor albus; frequent emission of semen; also after jealousy.

Nux vom., painful spot in the abdomen in the region of the solar plexus; pressure upon this spot renews the attack.

Opium, nightly attacks; combined with mental derangements.

Plumbum, heaviness and numbness of the legs before the spell: swollen tongue; *afterwards:* long-continued stupid feeling in the head, and want of clear consciousness.

Secale shows toxicologic effects, which hint strongly to it, but its sphere of action has not yet been defined.

Silic., *before the attack:* feeling of great coldness of the left side of the body; shaking of the left arm; slumber, with starting. The spasms spread, undulating from the solar plexus up towards the brain; violent screaming; groaning; tears drop out of the eyes; foam before the mouth. *Afterwards:* warm perspiration; slumber; paralysis of the right side; for scrofulo-rhachitic individuals; during sleep at night; worse about *new* moon.

Stannum is recommended as one of the most important remedies, without particular indications; except that its sphere of action is said to have a strong bearing upon the genital organs of both sexes.

Stram., epileptiform spasms; thrusting the head continually in quick succession to the right; continual rotatory motion with the left arm; pain in the pit of the stomach; obstinate constipation; deep, snoring sleep; low-spirited; fear of death; desire to be alone.

Sulphur, *before the spell;* crawling and running as of a mouse down the back and arms; or a sudden feeling as if a mouse were running from the right foot up the leg to the right side of the abdomen. After the attack, which consists of various convulsive motions, he wipes the tears from his eyes; soporous sleep; great exhaustion. Chronic cases always of psoric taint; suppressed itch.

Veratr. viride and **Zizia** are likewise recommended.

Eclampsia Acuta.

This is an affection entirely analogous in its external symptoms to epilepsy—sudden loss of consciousness, frequently setting in with a shriek; tonic and subsequently clonic convulsions, which are followed by a comatose sleep. But it is entirely different from epilepsy, in that it always accompanies some other morbid derangement, with the cure of which it either ceases, or ends fatally. According to the individualities which it attacks we find in books different forms of eclampsia mentioned.

1. Eclampsia Gravidarum et Parturientium, Puerperal Convulsions.

Its occurrence is rather rare—one in about five hundred pregnancies, and perhaps less than that. During pregnancy it is of a very rare occurrence, and even then is scarcely ever noticed before the sixth month. It occurs most frequently during the act of parturition; seldom during the lying-in period. Primaparæ are most subject to it, and it sets in mostly during the dilatation of the os uteri, or immediately after the expulsion of the child. According to Frerichs, it has been observed that such women suffer frequently with albuminuria during pregnancy, though this is not invariably the case. During the lying-in time these convulsions are generally the commencement of inflammation of the womb. The attack itself is characterized by the same convulsive features as are described under epilepsy. When setting in during pregnancy, these convulsions generally cause contractions of the womb and abortus; when at the beginning of labor-pains, they frequently retard the natural progress; but when towards the end of parturition, they are apt to hasten the expulsion of the fœtus. After the birth of the child the contractions of the womb generally cease; and this may give rise to hemorrhages, retention of the placenta, and inflammatory processes of the womb. The convulsions themselves may continne for hours afterwards, though they are mostly of less intensity. The influence upon the child is, according to Scanzoni, not necessarily fatal; about one-half of them are said to die. The later the convulsions begin the greater is the chance for the child, and *vice versa*. The prognosis is doubtful; the earlier they commence the more so.

Therapeutic Hints.—As albuminuria is frequently a forerunner of this terrible complaint, the patient ought to be carefully treated during pregnancy.

Compare Albuminuria.

Bellad., deep red face; enlarged pupils; screaming; jerking and general convulsions; all which are signs of cerebral congestion.

Chinin. sulph., albuminuria; tetanic spasms with loss of consciousness during parturition and afterwards; swollen veins on the head and neck; pulse frequent, intermittent, and weak.

Cuprum, during the lying-in time; sour-smelling sweat; miliary eruption; anxiety; easily frightened; heaviness of the head; soreness of the abdomen to pressure; burning in the small of the back; numbness of the arms.

Gelsem., during pregnancy, and where there is an anæmic condition present; protracted labor; rigid os uteri.

Hyosc., cold perspiration; pale face; suffocating spells and convulsions during parturition.

Opium, during parturition; cessation of labor-pains; coma; retention of stool and urine; after a fright.

Platina, after parturition; profuse hemorrhage; yawning; convulsions.

Veratr. viride, during parturition; also after blood-letting, during the puerperal convulsions, causing furious delirium; cold, clammy perspiration.

Also, compare the hints under the head of Epilepsy.

2. Eclampsia Infantum, Convulsions of Children.

By this term is understood convulsions of children, during which they lose their consciousness more or less completely, which come on in spells, run an acute course, and which are generally connected with some other morbid process. There exists no stricter definition as yet.

Eclampsia attacks by preference boys during the first years—stout as well as sickly—especially during dentition. It often breaks forth at the commencement of exanthematic fevers, also instead of the *chill* in intermittent fever; succeeds a sudden fright of the mother in the event of her suckling the child immediately. It may be caused by fright, fear of punishment, strong light, tickling, or violent pain; intestinal irritations from worms, indigestible food, such as raisins, cakes, the pulp of oranges, &c. These convulsions are characterized by loss of consciousness; spasms all over; congestion of the head; cyanotic appearance of the face, or, in anæmic children, paleness of the face; snoring; rattling breathing; sometimes vomiting, or involuntary discharge of urine and feces. They sometimes follow each other in rapid succession, and may terminate life in consequence of asphyxia unexpectedly; as a rule, however, they yield readily to the appropriate homœopathic remedy.

Therapeutic Hints.

Acon., great restlessness; high fever; dry skin, after fright; from irritation of seat-worms; from taking cold: in consequence of inflammatory affections of the spine; during teething.

Apis, shrieking; boring the head into the pillows; inflammatory affections of the brain.

Arsen., spasms, preceded by burning heat of the whole body, with constant licking of the dry, cracked lips; wants to drink constantly,

but little at a time; is hasty in all its motions; grasps the tumbler or any thing it wants eagerly; is very restless, with anxious expression of the face.

Bellad., glowing-red, as well as a pale face, with enlarged pupils; great heat in the head; great vascular erethism; drowsiness, with inability to sleep; starting and jerking during sleep; grating of teeth; especially during dentition; scrofulous diathesis.

Calc. c., the anterior fontanel remains wide open; glandular swellings about the neck; teething process is either very slow or else too rapid; great perspiration about the head; greatly inclined to take cold; hard, swollen abdomen; rather inclined to looseness of the bowels; often indicated after Belladonna; one of the most important remedies during dentition; scrofulous diathesis.

Camphora, anæmic subjects; coldness of the whole body.

Chamomilla, one cheek is red, the other pale; hot perspiration on the head, especially on the hairy portion; great thirst; bloated bowels; colicky pains; greenish discharges; sour vomiting; constant moaning and groaning; restlessness; the child wants to be carried about all the time. During sleep a suspicious working of the muscles of the face, as if smiling; during dentition; also, after nursing the breast of a woman laboring under the effects of a recent fit of passion.

Cicuta, especially when the child, without any premonitory signs, becomes suddenly stiff, with his eyes fixed upon one point; also in violent spasms of the head and the upper portion of the body; with bluish and puffed face; also in convulsions from worms.

Cuprum, in anæmic conditions; shrill cries during the attack; drowsy and stupid condition during the intervals, with nausea and vomiting of slime; bloated abdomen, with involuntary, thin discharges from the bowels; also when the child from crying loses its breath and draws its feet spasmodically upwards and backwards upon the nates.

Cypripedum pubescens, in the premonitory stage, when there is a morbid irritability of the brain, in consequence of which the child is very excitable, laughs and plays at unwonted hours; is very wakeful and laughs even in sleep.

Gelsemin., during dentition, with sudden loud outcries; feverishness.

Hyosc., congestion of the head; bloated and dark face; protruding eyes; shrieks; foam at the mouth; involuntary discharges of urine, from fright or fear.

Ignatia, violent convulsions; often tonic spasms predominant; nervous temperament; during dentition; during the commencement of

exanthematic fevers; after fright; or when children have been punished, and go to sleep soon afterwards.

Ipecac., pale face; nausea; vomiting; almost always when caused by eating indigestible food: raisins, pound-cake, the pulp of an orange, &c.; or when the eruption of an exanthematic fever strikes in by taking cold.

Opium, trembling of the whole body, convulsive motions of the extremities; soporous condition with snoring; retention of stool and urine; after a fright; or from nursing soon after a sudden fright of the mother.

Platina, in anæmic subjects; tonic spasms without loss of consciousness; trismus; pale, sunken face; after the spell the child lies on its back, draws up its limbs and spreads its knees.

Stannum, renewal of convulsions with the cutting of every tooth; also in consequence of worms.

Stramon., congestion of the head; heat all over the body; red face; spasmodic thrusting of the head in all directions; profuse urine; deep, snoring sleep.

Sulphur, often when all other remedies fail; after suppression of eruptions; diarrhœa in the morning; during the eruptive state of scarlatina.

Veratr. vir., convulsions with opisthotonus; anæmic subjects in consequence of diarrhœa.

Zincum, screaming and starting in sleep; anxious look when getting awake; heat of the body and nightly restlessness; twitching and jerking of different muscles, more on the right side than on the left; irritable mood; great appetite; bloated abdomen; involuntary discharge of urine. According to Kafka, during dentition in children with pale blood.

Tremor, *Trembling.*

This affection is of very frequent occurrence, and of various forms. Sometimes the head trembles, whilst the motions of the arms go on normally. Some persons tremble during rest as well as when in motion; others, only during rest; a majority, however, during motion. During sleep all trembling ceases; also frequently when in a horizontal position, or in a position in which the trembling extremity rests firmly upon support elsewhere. Reflex motions are performed sometimes tremblingly, sometimes normally, whilst all automatic motions almost always remain undisturbed. Exertion of the will

sometimes aggravates, sometimes masters the tremor; and during intense interest upon a subject it may cease entirely. Trembling may be partial, confined to the upper extremities, or extend over all animal muscles; so that even the muscles of the face and jaws are involved. It is mostly of a transient character; sometimes part and parcel of a disease; sometimes, however, it becomes habitual, chronic, life-long. In children, it is found only occasionally; never of long duration. Old age is especially subject to it, (tremor senilis.) We find it likewise more amongst women than men. Brain and spinal diseases (softening and atrophy) are mostly attended by it.

It is brought on especially by the vapors of mercury; lead-poisoning; opium-eating, and abuse of alcoholic drinks. It may be the result of typhus, and an effect of sexual excesses. Temporarily it may be caused by mental excitements, over-exertions of the muscles, too much coffee or tea-drinking, and by too low a temperature. To the latter corresponds the trembling during the chilly stage of intermittens. Likewise we find trembling easily excited after being tired out, mentally depressed, or exhausted in any way; and therefore it is frequently found during convalescence; after epileptic fits; catalepsy; neuralgia; and during the periods of menstruation and lactation.

Being a mere symptom of other disturbances, it may suggest: Calc. c., Cicuta, Merc., Opium, Plat., Puls., Rhus t., Stram., Sulphur.

The feeling of internal trembling indicates: Calc. c., Jod., Rhus t., Staph.

Paralysis Agitans.

It appears in its external manifestation as a tremor of high degree; but differs from it by its constantly-increasing intensity, and by its liability to terminate in paralysis and death.

It commences lightly, as a feeling of weakness, with slight trembling of the extremities or of the head. The patient is still able to execute all voluntary motions, and the trembling at first is not constant, and may be mastered by the influence of the will. But at length it increases in intensity, and becomes a perfect shaking of the whole body, by which even the bed upon which the patient rests is set in motion.

Sleep, and easy position, which at first will stop this shaking, eventually lose this effect; and the skin of the patient becomes sore in different places from the friction occasioned by the continued

shaking. which the patient is unable to control. In some cases the patient has an irresistible desire to *run*, either forwards or backwards, which at first he can resist to a certain degree, succeeding in making some uncertain steps on his toes; but at once he falls into a hasty run, until he regains control over these involuntary motions. At length, however, he cannot walk at all, but must be held back from these irresistible pitching forward or retrograde motions.

To all this are gradually associated: general exhaustion, great sensitiveness of the whole body, paralysis of the voluntary muscles, difficult deglutition, relaxation of the sphincters, with involuntary discharges of feces and urine, until, attended by the loss of mental capacity and delirium, death relieves the patient from this dreadful state.

Its causes are obscure. It is said to have followed after taking cold, and after mental excitements; and its seat is supposed to be a morbid affection of the brain within the corpora quadrigemina and adjacent parts.

Therapeutic Hints.

Compare Arsen., Rhus tox., Stram.

The second form, in which the voluntary nerves may be affected, is

Paralysis, Akinesis,

Which is a want or loss of the normal contractility of the voluntary muscles.

We have already seen, in our previous explanations, that this loss of contractility is associated—

1. *With anæsthesia of the sensory nerves.* In anæsthesia of the trigeminus the face loses not only its feeling, but also its natural form; and a want of feeling in the lower extremities also causes uncertainty in the gait.

It is likewise associated—

2. *With the cessation of consciousness.* Sleep for example relaxes all muscles, and so does syncope or fainting. In the first, however, all reflex motions go on vividly; tickle one who sleeps, and you will find him trying to get away from the disturbing cause. In syncope he does not. In the first case consciousness only is at rest; in the other the reflex power of the sensory nerves is interrupted or suppressed.

3. *With disturbances of the brain;* they may be the consequences of

faulty nutrition, poison, concussion, pressure of tumors, apoplectic effusion, inflammatory softening, or sclerosis.

4. *With lesions of the spinal cord.* If the lesion has its seat in the anterior or lateral fibres, or in the gray substance, it destroys the conducting power of the motory fibres, and all voluntary motion below the affected part ceases.

5. *With an interruption of the conducting power of the nerves within their own course,* or any place, from their origin to their termination, may this be caused by concussion, pressure, or separation, the parts below lose all power of voluntary motion.

6. *With such morbid states as may prevent the motory nerves from being sufficiently nourished by the arterial blood.*

A condition in which both motion and sensation are at the same time lost is called *paralysis completa;* when, however, motion alone is lost it is called *paralysis incompleta,* or *paresis.*

The extent of the paralytic affection varies greatly. Sometimes it is confined to the course of a single nerve, and in some cases it gradually extends over all the motory nerves, causing death, when it attacks also the automatic motions. Those causes which have their origin in the *brain* are mostly followed by paralysis of the opposite side of the body—*hemiplegia.*

When the lesion exists in both hemispheres, there is generally paralysis of both sides of the body. In some cases, however, that side only is paralyzed which is opposite to the severest lesion, or at least, mostly that side.

Such paralytic states are always accompanied by more or less serious mental disturbances. We cannot conclude from the nature of the paralysis upon the nature of the cerebral lesion. Only so much seems certain, that a slow development of a brain disease generally causes slight paralysis, which may disappear and reappear; whilst sudden disturbances are mostly associated with the most complete and general paralysis. Neither can we judge from the paralytic state upon the *seat* of the central lesion. Only this much may serve as a guide:

Lesions which exist in the *spinal cord,* on account of the small diameter of this organ, generally cause a paralysis on both sides, or at least a paralysis of all the motory nerves which lie below the lesion on that side. When both sides are affected, it is called *paraplegia.*

Therefore a lesion in the *lumbar region* causes paralysis of the lower extremities and muscles of the pelvis; in the *dorsal region,* in addition to relaxation of the abdominal and lumbar muscles, causes a

difficulty of expiration and inspiration, meteorism, priapism and paralysis of the sphincters ani and vesicæ; and a lesion in the *cervical region* causes, in addition to the above, paralysis of the upper extremities, of the respiratory muscles, and those of deglutition.

Paralysis from a spinal cause is never attended with disturbances of the mind.

Its prognosis is just as various as its causes.

Therapeutic Hints.

Aesculus glabra is recommended for paralytic affections of the lower extremities.

Aesculus hipp., for paralysis of the upper extremities.

Aluminum met., paralysis from spinal diseases; loss of sensibility of the feet; inability to walk only with open eyes, and in the day-time.

Anacardium, after apoplexy; loss of memory; imbecility of mind; loss of will.

Arnica, in consequence of exudations within the brain or spine; in consequence of apoplexy; weakening diseases; protracted intermittent fevers and ischias.

Arsen., when associated with great prostration; also in spinal affections with gressus gallinaceus, and as an antidote to lead-poisoning.

Baryta c., general paralysis of old age, with loss of memory and trembling of the limbs; also after apoplexy in old age, and especially in paralysis of the tongue.

Bell., apoplexy; congestion of the head; paralysis of the one and spasm of the other side of the body; paralysis of the face.

Caulophyllum, paraplegia in consequence of retroversion and congestion of the womb after child-birth, with partial loss of sensation in the affected limbs; considerable emaciation, anæmia and general debility.

Caust., paralysis of the face or tongue or hemiplegia, with giddiness, weakness of sight, weeping mood; hopelessness; fear of death; drawing, lame feeling in the affected part; after exposure to severe, cold winds; catarrhal and rheumatic conditions; suppressed itch or other chronic eruptions; apoplexy.

China, after great loss of blood.

Cocculus, paralysis of face or tongue or pharynx; paraplegia; rheumatic lameness; in weakened and nervous subjects, who are inclined to fainting fits and palpitation of the heart; also when the paralytic affection originates in the small of the back after taking cold, with cold feeling of the extremities and œdema of the feet; likewise after apoplexy.

Colchicum, after a sudden suppression of general perspiration or of sweat of the feet by getting wet.

Cuprum, after apoplexy, when there is congestion in the chest; strong palpitation of the heart, or slow, weak and small pulse; the eyelids keep closed and twitch; when opening the eyes, the eyeballs move about; paralysis after cholera and typhus.

Dulcamara, after taking cold, and suppressed eruptions; paralysis of the upper and lower extremities, and the tongue; the paralyzed arm feels icy cold.

Ferrum, after great loss of vital fluids.

Gelsem., loss of motion, but not sensation; paralysis of the organs of deglutition, and in aphonia, succeeding diphtheria.

Graphites, rheumatic, peripheric paralysis of the face.

Hepar, after mercurial poisoning.

Ignatia, after great mental emotions and night-watching in the sick-chamber.

Kali c., trembling; paralytic weakness, with cramps in fingers and hand; also paralytic weakness in the hip-joint.

Lachesis, especially left side; awkward, stumbling gait; gressus gallinaceus; after apoplexy.

Merc., rigidity and immobility of all the limbs, although they can be easily moved by others; indescribable malaise of body and soul; trembling of limbs and body.

Natrum m., paralytic condition of the lower limbs; painful contraction of the ham-strings; after intermittent fevers; diphtheria; sexual excesses, and violent fits of passion.

Nux v., incomplete paralysis of the face or arms or legs, with vertigo; weak memory; darkness before the eyes; ringing in the ears; loss of appetite; burning in the stomach; flatulence; vomiting after eating and drinking; constipation; especially in drunkards.

Oleander, painless stiffness and paralysis of the limbs; insensibility of the whole body; trembling of the knees when standing, and of the hands when writing; preceded by spells of vertigo a long time before paralysis develops itself.

Opium, paralysis and insensibility after apoplexy; in drunkards; in old people; retention of stool and urine.

Phos., paralysis in consequence of spinal affections; after sexual excesses; after confinement; tingling and tearing pain from the back down into the limbs; gressus vaccinus.

Plumbum, paralysis complete, with atrophy of the affected parts; preceded by trembling; mental derangement.

Rhus t., rheumatic paralytic affections after getting wet, and after great or unwonted muscular exertions, strainings, &c.; in consequence of typhoid processes; with painful stiffness, tearing, drawing and aching of the whole body; sometimes with tingling and numbness of the parts, or continued cold feet for a long time; worse during rest, and when commencing to move; from washing in cold water; with every change of the weather; better from dry heat near the stove; from continued gentle moving about, and flexion of the limbs.

Secale, paralysis after spasms and apoplexy, with rapid emaciation of the affected parts, and involuntary discharges from bowels and bladder.

Silic., paralysis of the left hand, with atrophy and numbness in the fingers; paralysis of the legs, always worse in the morning, with heaviness in the head and ringing in the ears.

Stannum, hemiplegia, especially on the left side, with a feeling of a heavy load in the affected arm and corresponding side of the chest, and frequent night-sweats.

Stram., after convulsions; also paralysis of the one and spasms of the other side.

Sulphur, after typhus, exanthematic fevers, suppressed itch, or chronic eruptions and spasms; also when other remedies seem to fail.

Zincum, worse after drinking wine.

Besides, compare the following, which are partly taken from Jahr: for—

Paralysis of the eyelids: Bell., Cocc., Nitr. ac., Opium, Plumb., Rhus t., **Sepia, Spigel.**, Stram., **Veratr.**, Zinc.

Paralysis of the face: Bell., Caust., Cocc., Graph., Nux vom., Opium.

Paralysis of the tongue and organs of speech: Acon., Arn., Arsen., Baryt. c., Bell., Caust., Cocc., Cupr., Dulc., Hepar, Hydro. ac., Hyosc., Lach., Mur. ac., Opium, Plumb., Stram.

Paralysis of the organs of deglutition: Bell., Canth., Caust., Cocc., Cupr., Gelsem., Lach., Silic., Stram.

Paralysis of the bladder: Arsen., Bell., Canth., Dulc., Hyosc., Lach., Lycop., Natr. m., Opium.

Paralysis of the rectum aud sphincter ani: Caustic., Coloc., Hyosc., Lycop., Opium, Ruta, Zincum sulphuricum.

Paralysis of all the limbs: Arn., Ars., Colch., Dulc., Merc., Nux v., Rhus t.

Paralysis of the upper extremities: Acon., Arn., Bell., Calc. c.,

Caust., China, Cocc., Colch., Dulc., Lyc., Merc., Nitrum, Nux vom., Rhus t., Sepia, Tart. em., Veratr.

Paralysis of the hands: Ambra, Arsen., Caust., Cupr., Ferr., Natr. m., Rhus t., Ruta, Silic.

Paralysis of the fingers: Ambra, Calc. c., Cupr., Natr. m., Secale, Silic.

Paralysis of the lower extremities: Aluminum, Arn., Bell., Bryon., China, Cocc., Colch., Dulc., Kali c., Merc., Nux vom., Phos., Plumb., Rhus t., Secale, Sulphur, Veratr.

Paralysis of the feet: Arsen., China, Oleand., Plumb.

Paralysis in consequence of—

Mental emotions: Arn., Ign., Natr. m., Stann.

Bodily exertions: Ars., Arn., Rhus t.

Spasms: Arsen., Caust., Cocc., Cupr., Hyosc., Lauroc., Nux vom., Plumb., Rhus t., Sec., Silic., Stann., Stram., Sulphur.

Apoplexy: Arn., Anacard., Baryt. c., Caust., Cupr., Lach., Nux v., Plumb., Secale, Stann., Stram., Zinc.

Taking cold: Arn., Caust., Colch., Dulc., Merc., Rhus t.

Getting wet: Caust., Rhus t.

Suppression of sweat: Colch.

Onanism, sexual excesses: China, Cocc., **Ferr., Natr. mur., Nux v.,** Sulphur.

Intermittent fevers: Arn., Ars., Lach., Natr. m., Nux v., Rhus t.

Typhus fever: Cocc., Cupr., Rhus t., Sulphur.

Diphtheria: Arsen., Gelsem., Lach., Natr. m.

Cholera: Cuprum, Secale, Sulphur, Veratr.

Suppressed eruptions: Caust., Dulc., Hepar, Sulphur.

Poisoning by arsenicum: China, Ferr., Graph., Hepar, Nux v.

Poisoning by lead: Cupr., Opium, Platina.

Poisoning by merc.: Hepar, Nitr. ac., Staph., Stram., Sulphur.

THE BLOOD.

This being *the* fluid which nourishes all parts of the system, which sustains respiration, which, in short, is the life of the body, must necessarily cause great disturbances of the body when itself becomes in any way abnormally changed. The blood consists of *corpuscles* and *serum.* The corpuscles are of two kinds—*red,* and *colorless* or *white.* The serum contains *water, fibrin, albumen, salts, fatty substances,* and *extractive matters.*

Any of these *constituents* may be abnormally increased, decreased, or altered, causing an abnormal condition in the *quality* of the blood.

The whole *mass* of the blood may be increased or decreased, causing an abnormal *quantity*. Obnoxious substances, like sugar, uric acid, oxalic acid, ammonia, sulphuretted hydrogen, urates, gall, pus, may be mixed with, and thus may impregnate, the blood, causing a *poisoned state* of the whole fluid.

It is only within the last ten or twenty years that these different changes of the blood have been made the subject of closer examinations, and much of it requires still closer investigations. I shall, therefore, confine myself to the most important facts which these researches have brought to light.

I. Cyanosis.

The blood-corpuscles absorb the oxygen, with which they come in contact during their course through the lungs. Any cause which prevents this absorption of oxygen by the blood-corpuscles hinders the transformation of the *venous* into *arterial* blood. This is the nature of *cyanosis*. It consists in a decreased absorption of oxygen by the blood-corpuscles. Its causes are numerous, which may be arranged under the following heads:

1. *Imperfect respiration*, in consequence of spasms, or œdema, or croupous inflammation of the glottis and larynx; or in consequence of obstructions within the trachea and bronchial tubes, caused by spasms, mucus, blood, foreign bodies, false-membranes; or in consequence of obstacles which prevent the air from entering the air-cells of the lungs, caused by infiltration, hepatization, exudation, (emphysema, hydrothorax, pneumothorax;) or in consequence of paralytic affections of the respiratory muscles and diseases of the abdomen, by which the lungs become compressed; enlargement of the abdominal organs, tympanites, ascites, &c.

2. *Imperfect circulation*, in consequence of heart disease, obstructions within the pulmonary vessels, obliteration of the pulmonary tissue and blood-vessels, immediate transmission of the venous blood into the left ventricle, in consequence of the non-closure at birth of the foramen ovale.

3. *Inhalation of air*, which contains too little oxygen, and is impregnated with irrespirable gases, like carbonic acid gas, &c.

4. *Inability of the blood-corpuscles to absorb oxygen.* This has been

observed in some severe illnesses, such as typhus, pyæmia, and in the last stage of pulmonary tuberculosis; *cholera.*

Symptoms.—Bluishness of the surface of the body, especially of the face and lips; *coldness* of the extremities and depression of the muscular and nervous system; sopor; in a still higher degree, asphyxia.

Cyanosis is, therefore, not a disease in itself, but a mere consequence and symptom of other derangements; still as a symptom, it has, nevertheless, some therapeutic value, suggesting Acon., Amm. c., Arn., Arsen., **Camphor,** Carbo. veg., Con., **Cupr., Dig., Lach., Opium,** Puls., Rhus t., Samb., Sec. c., Veratr.

In new-born children, where the foramen ovale has not closed, Lach.

2. Dissolution of the Red Blood-Corpuscles.

Each blood-corpuscle lives a certain period of time, and after that it dissolves and disappears, and a new one forms in its place. Thus a constant rotation between life and death goes on in these minute bodies in order to sustain the life of the whole body. In disease, however, this equilibrium is sometimes destroyed; more corpuscles die than are newly generated, and this causes a state of the blood which is called OLIGOCYTHÆMIA. It is characterized by weakness of the muscular system, tired feeling all over; nervousness, palpitation of the heart, bellows-sounds of the heart and large arteries; murmur in the jugular veins.

In still other cases this dissolution of the blood-corpuscles goes on so rapidly and to such an extent that the blood-serum becomes overloaded with the constituents of the destroyed corpuscles, and is thus discolored. Even the excretions of the body assume a bloody or dark appearance; and the exudations are of a brownish, or still darker hue. The skin and mucous membranes become tinctured with hæmatin, (the coloring matter of the blood,) and color it yellowish, which may be mistaken for jaundice.

If such a profuse dissolution of blood-corpuscles is confined to a certain portion of the circulation, it constitutes an essential part in what is called LOCAL GANGRÆNE. A general putrid dissolution through the whole system is GENERAL GANGRÆNE, SEPTICÆMIA. We find such states of general dissolution in some forms of typhus, scurvy, puerperal fevers, yellow fever, and various other forms of tropical fevers. By what it is caused, we do not know.

Compare Alum. P. S., Ars., Carbo veg., China, Lach., Nitr. ac., Secale.

3. Leukæmia,

Which is an abnormal increase of colorless or white blood-corpuscles and a decrease of red corpuscles at the same time. This state of the blood is found mostly in complication with an enlarged spleen; also with enlargement of the liver, and with enlargement of the lymphatic glands. Causes unknown.

A slight increase of the white corpuscles is found after loss of blood; during inflammatory processes; pregnancy; typhus; intermittent fevers; sycotic contamination, and in various chronic diseases.

4. Hydræmia

Consists in a decrease of albumen, and an increase of water in the serum sanguinis. In consequence of this the serum is much more prone to exudation than in its normal state, and we therefore find this state of the blood associated frequently with *dropsical effusions.*

Its *causes* may be:—

1. *Long-continued pathological secretions of clear albumen, or albuminous substances,* (mucus, milk, &c.;) in consequence of albuminuria; serous diarrhœa; pus-formation; exudation; loss of blood; mucous discharges; too copious flow of milk; too long-continued nursing.

2. *Insufficient supply of nutriment or disturbed nutrition,* so that the received nourishment is not converted into albumen, and assimilated. Hydræmia is therefore found in connection with the most different morbid processes. We find it in combination with diseases of the heart and lungs; especially tuberculosis; chronic indigestion; protracted intermitting fevers, and Bright's disease, &c.

Therapeutic Hints must be referred to the above-named morbid conditions.

5. Plethora.

The quantity of the blood must always be estimated, as a relative mass. We cannot say, so much is just enough, one ounce more is too much. And in fact during life we have no means for such estimation. The whole plethoric theory therefore rests upon rather weak legs. On the other hand, if we observe different individuals, it seems clear enough that some are richer in this vital fluid than others. And as objective signs, which indicate such repletion, there

are stated: 1. *A higher degree of redness of the body*—such higher color may be, however, often very fallacious; it is of any account only when it is perpetually so; and, 2. *The greater fulness and repletion of the circulatory vessels*, arteries and veins. This is plethora of olden times. More recent observers have split this theory into three branches; they divide plethora of the old into—

1. PLETHORA VERA, *true plethora*, which is said to characterize itself by fulness of the arteries and veins, repletion of single organs, florid complexion and increased temperature of the body.

2. SEROUS PLETHORA, an increase of blood-serum, and decrease of corpuscles, which characterizes itself by fulness of the arteries and veins, paleness, or else quick change of color; and,

3. PLETHORA AD VASA, or *false plethora*, which is not too much blood in general, but too great an afflux of blood into the blood-vessels, as in fevers, in consequence of bodily and mental exertions, spirituous, irritating drugs, &c.

All these distinctions are of little use for Homœopathic practice, as the Homœopathic physician will scarcely have occasion to trouble his brain with the question: Shall I bleed? or shall I not?

6. Anæmia, Oligæmia.

In the strict sense it means *a decrease in the normal quantity of blood*, a state of things which now and then may happen. It is mostly combined with hydræmia. The blood is less in quantity—the serum contains less albumen and more salts than is normal, and the red blood-corpuscles are also diminished. Such states are found after great loss of blood, and after exhausting diseases; such as Bright's disease; tuberculosis; cancer; profuse pus-formation; diarrhœa, &c., and it generally ends in dropsy. The physical signs of anæmia are the following:

1. *The bellows-sound* in the heart; best heard at the apex of the heart with the systolic tic.

2. *The arterial murmur*, which consists in a kind of intermitting blowing noise, synchronous with the pulse.

3. *The venous murmur*, which is a continuous, purring sound within the larger veins.

7. Chlorosis.

Some writers use the name chlorosis as entirely analogous with anæmia, (Andral, Gavarret, Bouillard;) others make a difference be-

tween the two, and call *anæmia* that state of the system in which the insufficiency of the blood arises from known causes; *chlorosis*, when it arises from unknown causes, (Becquerel, Rodier;) still others confine chlorosis to that kind of anæmia which we find especially in the female sex during the time of puberty.

Chlorosis, in the most limited sense of the word, is an anæmia, which arises spontaneously, without any known causes, in the female sex during the age of puberty.

Its symptoms are manifold:

1. *Blood* and *circulation.* There is, in all cases, a decided decrease of red blood-corpuscles. The pulse is usually slow, weak, soft, but the slightest exertion causes palpitation of the heart and irregular contractions of the arteries. Sometimes the palpitation of the heart becomes habitual and is one of the most prominent, and, at the same time, most annoying symptoms. Physical signs are those of anæmia, bellows-sounds of the heart, murmurs of the arteries and veins. The latter are the most constant.

2. *Color of the skin.* A conspicuous paleness, sometimes clear, sometimes yellowish, greenish, waxy. Even the lips and other mucous membranes appear pale; dark rings around the eyes. In some cases there is œdema of the feet, face, and eyelids; temperature decreased; breath cool; lips, nose, ears, hands, and feet cold. The patient is sensitive to cold; seeks a warm room.

3. *Muscular system.* Great weakness; easily tired.

4. *Nervous system.* Dizziness; headache; noise in the ears, especially in the right ear; pains in the different parts of the body, especially in the stomach, back; (spinal irritation;) even hysterical spasms; sad; without energy; frightful dreams; nightmare; melancholy, and even mania, and inclination to self-destruction.

5. *Digestion.* Want of appetite; digestion slow; sour and foul eructations; desire for sour things. This morbid appetite may increase to a desire for the most unnatural things, such as chalk, paper, ashes, coals, even excrements; or it may amount to *bulimia.* Often the most undigestible things—pork, beans, pastry, &c.—suit better than light soups, meat, &c. However, these digestive symptoms are, in some chlorotic persons, entirely wanting, and are, perhaps, dependent rather upon a morbid condition of the spine than upon that of the blood.

6. *Respiration* is frequently interfered with, especially after any exertion; they sigh and cough occasionally.

7. *Genital sphere.* There is generally amenorrhœa or irregular

menstruation with pain; thin, watery leucorrhœa in place of the menses.

Therapeutic Hints.

Ant. crud., menses commence at an early period, are profuse and cease afterwards; great deal of headache; peevishness; loss of appetite; irregular stool; excessive laziness and weakness; must lie down for hours; deep and unrefreshing sleep at night.

Arsen., trembling; frequent fainting; excessive debility.

Bell., laziness and indisposition to work or stir, great general debility, with weariness and a desire to sleep in the afternoon; shortness of breath; extreme paleness of the face changes instantaneously to redness, with cold cheeks and hot forehead.

Bryon., all the symptoms worse from the slightest motion.

Calc. c., scrofulous diathesis; disposition to colds and diarrhœa; great weakness or curvature of the spine; vertigo, especially on going up stairs; disgust for meat; craving for sour and even indigestible things, (chalk, coal, &c.;) after eating, swelling of the stomach and palpitation of the heart; menses sometimes too often and too profuse or wanting; leucorrhœa; great shortness of breath; great weakness of the muscles; walking wearies and makes the heart palpitate; sitting causes severe backache and headache; therefore constant inclination to lie down; hands and feet are cold; the fingers sometimes appear dead. The mind is generally full of concern about imaginary things that might happen to her.

Carbo veg., when complicated with itch and fluor albus; gums swollen, scorbutic and receding from the teeth; the teeth are loose; feels wretched all over; can scarcely walk.

China, in such cases as result from loss of vital fluids, menstrual or vicarious bleeding, suppurations, &c.; or which set in after severe and protracted illness, such as intermittent fevers, typhus, cholera, &c.; showing in either case a tendency to dropsical effusions and œdematous swellings. Besides, we observe sour belching, poor digestion, bloated abdomen.

Cina, on drinking wine she shudders as though it were vinegar; spasmodic yawning; headache, pain in the chest and back, caused by fixing the eyes steadily upon some object, as, for example, when sewing; all these pains are aggravated by external pressure; spells of intermittent fever every afternoon at four o'clock, with thirst and coldness of the hands and feet; colic and vomiting of ingesta; afterwards heat and sweat, followed by deep sleep.

Conium, menses wanting; genitals very sensitive; constant dry heat all over, without thirst; stitching pain in the region of the liver, and heaviness in the limbs; weeping mood; restlessness; great concern about any little thing that may happen; anxious dreams.

Cyclamen, suppressed menses; or scanty, painful menstruation; headache; vertigo; swollen eyelids; pale face, lips, and gums; loss of appetite; no thirst; constipation; palpitation of the heart; constant chilliness; *dread of fresh air;* disinclination to move and to work; constant drowsiness; wants to be alone, and weeping does her good. Is very similar to Pulsatilla, differing, however, from it, by its dread and disinclination for fresh air.

Ferrum, anæmia, characterized by great paleness of all the mucous membranes, especially that of the cavity of the mouth, by the bellows-sound of the heart and anæmic murmur of the arteries and veins; by great paleness of the face, which, however, is very apt to become suddenly fiery red, with vertigo; ringing in the ears; great palpitation of the heart and dyspnœa; thus showing a disposition to congestion and fluxion of blood to these parts of the body. All the muscles are feeble and easily exhausted from slight exertion; there is frequent vomiting of ingesta, especially after eating, and from motion; cardialgia; the menses are either suppressed or watery; we observe general emaciation; œdematous swelling of the body; cool skin; constant chilliness, and evening fever, similating very closely hectic fever.

Graphites, scanty, pale, delaying menses, or they do not appear at all; cool vagina; aversion to coitus; œdema of the eyelids, external genital organs and abdominal parietes, leaving on pressure the imprint of the finger; face pale and yellowish.

Ignatia, sensitive, nervous, hysteric women, who are inclined to spasmodic and intermitting complaints, and where the trouble is induced by mental emotions, such as fright, grief, disappointed love, &c.

Ipec., headache, as though the brain were mashed, with nausea and vomiting; miliary eruptions on the forehead and cheeks by spells; pale face and pale mucous membranes; scanty and short menses; weak pulse; cold hands; morose, enjoys nothing.

Natr. m., in chronic cases and cachectic individuals, with dead, dirty, withered skin; frequent palpitation and fluttering of the heart; suppressed menstruation; leucorrhœa; diminished sexual desire; oppression and anxiety of the chest; sadness.

Nux v., especially in those cases in which the functions of the stomach, intestines and liver are principally affected, and we may observe

a train of symptoms like the following: irritable, angry disposition; great, anxious concern about little things; headache, with bilious or sour vomiting, worse in the morning; pale, earthy face; feeling badly after eating bread or sour things; sour taste in the mouth; nausea and vomiting in the morning or after eating; cardialgia, with wind in the stomach; better from drinking something hot; obstinate constipation; running of the nose through the day, and stoppage of it at night; sore feeling all over in bed in the morning; dreads motion and fresh air; gets awake early in the morning, then dozes again and wakes up finally, feeling much worse than at any other time.

Phos., in deep-seated, chronic cases, with tubercular diathesis; brought on by depressing mental influences, such as grief, worriment, disappointed love, or by exhausting bodily causes, such as night-watching, loss of blood, diarrhœa, night-sweats, onanism, &c. We observe, in such cases, puffiness around the eyes, dry hacking cough, great weakness in the sexual organs, consequent upon previous irritation of these parts; leucorrhœa of a whitish, watery slime, especially profuse during the time of the menses; sometimes acrid and corroding; a total loss of energy in all the organic functions of the body.

Plumbum, want of breath and great oppression of the chest from motion; palpitation of the heart; obstinate constipation; œdema of the feet and anasarca; great muscular weakness.

Puls., great weakness and sluggishness in the circulation, manifesting itself in constant chilliness, coldness and paleness of the skin and extremities; soft, irregular pulse and palpitation of the heart, oppression of the chest and shortness of breath; disinclination to move and a sad and tearful disposition; the appetite is generally absent, and there is no thirst; the whole digestion is disturbed, and consequently the assimilation of nutriments for the blood does not take place properly. We observe, therefore, signs of anæmia, such as dizziness, especially when rising, and amenorrhœa, or scanty, slimy menses, which appear too late; in general the patient feels better in the open air. This distinguishes Pulsatilla from Cyclamen. It is frequently indicated after Calc. c., Ignatia, Sepia or Sulphur, and is followed well by Ferrum.

Sepia, bearing-down as if every thing would issue out of the genitals; prolapsus uteri and vaginæ; brown-reddish color of the vaginæ; diphtheritic ulcers in the vagina and on the labia; leucorrhœa, yellowish and passing away in starts; swelling of the external genital organs, with itching, burning and soreness; stitching pains in the ovarian region; palpitation of the heart; intermitting pulsation; occasionally

a hard thump of the heart; frequent sickness of the stomach, brought on even by the smell of cooking.

Sulphur, heat of the head, with cold feet; inclination to religious reveries; inflammation of the eyelids; frequent, unsuccessful desire for stool; leucorrhœa; oppression of the chest with palpitation of the heart; exhaustion even from talking; feels worse while standing; cutaneous eruptions; sleepy in the day-time, restless at night; perspires easily; feels faint before dinner. Is often necessary as a foundation for the better action of other remedies.

8. Cholæmia.

It consists in an impregnation of the blood with gall; which takes place when, by obstructions in the gall-ducts, the bile cannot be emptied into the duodenum, and thus becomes absorbed into the blood; or when, by diseases of the liver or the portal veins, the elementary constituents of the bile are not separated from the venous blood, but by some unknown process become transformed into gall within the veins themselves.

The highest form of this disorder we observe in the acute yellow atrophy of the liver. Its symptoms are always icterus, sopor, and other symptoms of brain-affections. Compare Icterus and Diseases of the Liver.

9. Uræmia.

This consists in an impregnation of the blood with urates, which, according to Frerichs, are decomposed into carbonate of ammonia. It takes place when the secretion of urine is prevented; especially in Bright's disease, cholera, or other disturbances, by which the urine is held back in the bladder.

Symptoms.—Besides those which the original disease causes, we find a urinous odor in the breath, sweat, vomit, and stool. There are also deafness, amaurosis, sleepiness or sleeplessness, sopor, coma, delirium, and convulsions.

Compare Diseases of the Urinary Organs.

10. Septicæmia.

In some conditions of the system, the blood seems to undergo certain changes in the living organism, similar to those which it undergoes when extracted from the body—a kind of *putrescence.* This state

of the blood has been called *Septicæmia;* which means, therefore, putrid dissolution of the blood. By chemical analysis of such blood, the alterations have been found to be various:

1. There have been found in it *acids* in excess; which seem to dissolve the blood-corpuscles.

2. There has been found in it *carbonate of ammonia,* which dissolves the fibrin and coloring matter of the blood-corpuscles.

3. Also *sulphuretted hydrogen.*

4. The blood is *deprived of fibrin;* not coagulable.

5. The blood-corpuscles have lost their power *to absorb oxygen;* and thus cannot sustain their nutritive functions.

6. The blood-corpuscles are *destroyed,* their coloring matter is dissolved in the serum; which, for this reason, becomes dark red or dirty brown.

7. The *extractive matters* are augmented and changed.

The *causes* are likewise various. It has been observed after violent exertions of mind and body; in endemic diseases; typhus, yellow fever, puerperal fever, pest, &c.; likewise in consequence of ichorous wounds, gangrene, &c. In other cases it seems to be produced by external poison, such as contagious and miasmatic influences; mercurial and alcoholic poisoning.

Its *symptoms* and consequences vary according to its degree and its complication. In higher degrees we find the dissolved constituents of the blood excreted by the kidneys, intestines, &c.; the changed blood-serum is infiltrated into the subcutaneous cellular tissue, serous membranes, &c. The nerve-centres are irritated; causing delirium, prostration, sopor, paralysis, &c. The pulse is small, weak, accelerated. The intestinal canal is inflamed, giving rise to ulcerative processes. Spleen and mesenteric glands are swollen. The skin is stinging hot, *calor mordax.*

In some cases of septicæmia its products, when transferred to other organisms, cause the same dissolution of blood in them; and in this way septicæmia may spread by infection and assume an endemic character. It is frequently combined with—

10. Pyæmia,

A morbid process, which, in its strict sense, is characterized by its tendency to a formation of multiple and lobular abscesses, or so-called pyæmic foci, in different parts of the body, especially in the lungs, spleen, liver, kidneys; in the subcutaneous cellular tissue, skin, and

brain. In a more general sense it is more or less combined with symptoms of septicæmia, and then mostly the consequence of profuse local pus-formation after amputations or other surgical operations; or in consequence of internal abscesses, carbuncles, phlebitis, puerperal fever, gangrene, &c.

Symptoms.—1. It usually sets in with a violent, shaking chill, which is followed by heat, or the chill alternates with heat. 2. The pulse is accelerated, very frequent, small and soft. 3. Prostration, headache, sleeplessness, delirium, coma. 4. Appetite is lost, thirst increased, stool irregular, sometimes diarrhœa of a most offensive character. The spleen is generally enlarged. 5. Lips and nostrils are dry and are covered with blackish sordes. 6. There is cough, dyspnœa, and symptoms of pleuritis and pneumonia. 7. The skin becomes discolored, yellowish, icteric, dry and hot, sometimes interrupted with profuse sweats, which are accompanied by miliary eruptions. Sometimes there is infiltration of the subcutaneous cellular tissue, which terminates in erysipelatous inflammation and ulceration of this tissue. 8. Sometimes there is purulent infiltration into the joints. 9. Local ulcerations secreting ichor instead of pus.

Therapeutic Hints.—Compare Arsen., Carbo veg., China, Lach., Phos., Silic.

II. Scurvy.

It is mostly of a chronic nature, and in its graver forms very similar to the symptoms of septicæmia. Its development is generally gradual. We observe at first general debility, getting easily tired, sleepiness, depression of spirits; sad-looking, pale, cachectic face, with blue rings around the eyes; pulse slow, soft; appetite gone, except for fresh, green, or sour things; stool slow; urine scanty; skin dry. Soon after these symptoms the appearance of the *gums* changes; they become bluish, swollen, spongy, and bleed at the slightest touch. There is a bad taste in the mouth and a fetid breath. The general debility increases; the patient suffers from acute pain in the extremities; ecchymosed spots appear on the skin; first on the legs, later all over the body, from the size of a lentil to that of a half dollar and larger, at first looking purple, in severe cases black; later, changing into all the different hues which extravasated blood undergoes; frequent nose-bleed. All these symptoms may reach a still higher degree; the weakness may augment to prostration, so that even the

slightest exertion or motion may cause fainting; the gums may issue a fetid, ichorous, bloody fluid; the ecchymosed spots may change into blisters, filled with ichorous fluid and forming ulcers.

The pain in the extremities may grow still severer, and their joints and bones may swell; effusions of fibrin beneath the skin may harden the legs like boards. All appetite is lost except that for sour things. The hard stool changes into a thin, ichorous, bloody diarrhœa, with colicky pains. The spleen is usually enlarged. Epistaxis increases, and there are even bloody secretions from the conjunctiva, respiratory organs, stomach, (by vomiting,) and from the urinary organs, in the form of bloody urine.

If to all these symptoms there be added extravasation of bloody serum into the pleura, the pericardium, the lungs, the brain or its membranes, the patient generally dies; either suddenly, or gradually, in consequence of increasing prostration and hectic fever. Of course, all cases do not terminate thus. Its duration, however, is long, lasting months; and convalescence is very slow, if left to nature.

Scurvy has been divided into *sea and land scurvy*, but there is in reality no difference between the two. *Its causes are:* Want of fresh vegetable food; exposure to damp, cold weather; bad water; cold, rancid meat; depressing mental emotions, fear, anxiety, want of confidence, &c. It has been found everywhere in our army where these conditions exist; soon ceasing, however, on the mere removal of the conditions.

Therapeutic Hints.

Agave Americana, countenance pale and dejected; gums swollen and bleeding; left leg, from ankle to groin, covered with dark, purple blotches; leg swollen, painful, and of stony hardness; pulse small and feeble; appetite poor; bowels constipated.

Ammonium carb., hectic fever, vast hemorrhages from the intestines, nose and gums; falling out of the teeth; muscles soft and flabby; emaciation.

Arsen., the gums bleed readily; there is fetid smell from the mouth; violent thirst, which obliges him to drink frequently, although but little at a time; offensive diarrhœa; excessive debility; stiffness and immobility of the knees and feet, with violent tearing pains, worse about midnight; better from external warm applications; great despondency and restlessness.

Canth., pains in the gums; coagulated blood in the mouth, early in the morning, in bed; bloody urine.

Carbo veg., swelling, receding, and bleeding of the gums; readily bleeding ulcers; general physical depression; attacks of sudden weakness, like fainting.

China, inertia; excessive debility; hemorrhage from the mouth, nose, and intestines; great desire for sour things; diarrhœa.

Hydrastis, physical prostration; faintish, weak feeling; ulcers on the legs.

Merc., spongy, bleeding gums, of a sickly appearance; they look white along the upper border and recede from the teeth; bluish color of the inner cheeks; fetid smell from the mouth. Sinking with an indescribable malaise of body and soul, obliging him to lie down; fetid ulcers on the legs, which become speedily putrid; spongy, bluish, readily-bleeding ulcers.

Mur. ac., swelling of the gums; scorbutic gums.

Natr. mur., scorbutic, putrid inflammation of the gums; bloody saliva; difficulty of talking, as if the organs of speech were weak.

Nitr. ac., swelling and bleeding of the gums; the teeth are loose; bloody saliva; putrid smell from the mouth; after abuse of mercury.

Nux vom., putrid bleeding; swelling of the gums; putrid ulcers in the mouth; cadaverous smell from the mouth; bloody saliva; spitting of blackish, coagulated blood; and blowing blood from the nose; pain in the limbs; great weariness and languor.

Phosph., the gums bleed easily and stand off from the teeth; sore, excoriated spots on the skin; ecchymosed spots.

Staphys., the gums are painful to the touch and bleed easily on being touched; scorbutic ulcers.

Sulphur, swelling of the gums, with throbbing pain in the gums; bleeding; fetid smell from the mouth; sleeplessness at night; desire for brandy.

Besides, compare Caust., Chin., Sulph., Cistus, Hepar, Sepia, Sulph. ac.

The old school have put their reliance on *lemon* and *lime-juice;* and there is no doubt that after the Englishmen commenced using *sauerkraut* on board of their vessels, scurvy diminished to a considerable degree on sea, and thus one might say, jokingly, that the great power which England attained at sea was founded upon sauerkraut.

12. Purpura, Morbus Maculosus Werlhofii.

This affection corresponds to scurvy in so far as its characteristic symptom consists, like that of scurvy, in an extravasation of blood

from the capillaries of the skin and mucous membranes; but it differs from it, as it has none of those peculiar affections of the gums, nor any of those fibrinous exudations into the subcutaneous and intermuscular tissues, neither hemorrhagic inflammation of the serous membranes, by which scurvy is characterized.

Its causes are unknown. We find it most frequent in weakly persons; during convalescence, and in persons who live in poor circumstances and damp places; but yet robust persons, in good circumstances, are not exempted.

The outbreak of the disease is generally preceded by disturbed digestion and general weakness and debility; this may last several days, or even weeks; then we observe little purple spots coming out, especially on the extremities and trunk; less frequently on the face. Whilst still new ones are forming, the first gradually become green and yellow; in some cases these spots discharge blood. As on the external skin, so do we see ecchymosed spots on the mucous membranes of the mouth and fauces; and it happens oftener in purpura than in scurvy that profuse hemorrhages from the nose, stomach, bowels, and kidneys take place, in consequence of which anæmia, syncope, hydrops, and even death may ensue. As a general rule the patients get well after two or four weeks.

Therapeutic Hints.—Compare, as the most important remedies, *Phos.*, *Ledum*, *Bryon.*, Arn., Arsen., Lach., Sulph. ac.; and in cases of Epistaxis, Hæmatemesis, or Hæmaturia, the corresponding chapters.

13. Hæmophilia.

By this name is meant a congenital hemorrhagic diathesis, in consequence of which even the slightest wounds, no matter where, always bleed very profusely. The cause is unexplainable; we only know that this tendency to bleed exists in certain families, and is propagated to three or four generations; sometimes leaping over one link and appearing again in the following. The female members of such families are generally, although not always, exempt.

There are no objective signs by which this diathesis could be recognized before the bleeding sets in. Such persons, however, are described as having always a very fair skin, with the blood-vessels shining through, blond hair and blue eyes. In some cases it shows itself immediately after birth, as an uncontrollable bleeding of the

navel; oftener during the first or second dentition, and in other cases still later. Then the blood oozes uninterruptedly from the slightest wound, as out of a sponge, until the patient becomes exhausted from loss of blood. Mere bruises cause large effusions of blood into the cutaneous and subcutaneous tissues. Spontaneous bleedings from the nose, which are by far the most frequent, or from the lungs, stomach, intestines, or kidneys, do not take place until after several bleedings from external wounds. Such spontaneous internal hemorrhages are mostly preceded by palpitation of the heart, oppression, congestion to the head, pain in the limbs, and, in some cases, by painful swellings of the knee and ankle-joints. Bleeders seldom reach an old age; in some cases, however, this tendency to bleed gradually diminishes with the advancing years, and ceases entirely at last.

Therapeutic Hints.—It seems that *Phosphorus* must be the main remedy. Compare likewise Secale, and for internal bleedings those chapters which treat of the corresponding hemorrhages. Erigeron is said to be very efficacious.

14. Scrofulosis.

We understand by this term a cachexia, which manifests itself as a nutritive disturbance in the external skin, mucous membranes, joints, bones, organs of sense, and, above all, the lymphatic glands, in such a manner that individuals thus affected betray the internal disorder by a peculiar *habitus*. According as the faulty nutrition leads either to an accumulation of fatty deposits on certain parts of the body, or to a deficiency in fat on account of too rapid growth, scrofulosis has been divided into a *torpid* and an *erethic form*. The habitus of the first *Canstatt* portraits in the following manner: "uncommonly large head; coarse features; thick, swollen nose and upper lip; broad cheek-bones; large belly; swollen glands on the neck; soft, flabby muscles." The erethic form he characterizes as follows: "conspicuous white skin, which reddens easily, and through which the blood-vessels shine forth; red lips and cheeks; bluish color of the sclerotica, which gives to the eyes an expression of languor; the muscles of such individuals are thin and flabby; the weight of the body does not correspond with their size, showing a want of solidity of their bones; their teeth are fair, bluish, glistening, long and narrow, and their hair is soft."

The special changes in the *skin* are *eruptions*, which usually have their seat in the face and on the scalp; and they consist in a superficial dermatitis, with exudation of lymph upon the free surface, constituting eczema or impetigo, or, as they are likewise called, tinea or porrigo, &c. Destructive processes, like forms of lupus, do not take place until sometimes at a much later period.

The scrofulous affections of the *mucous membranes* involve most generally by their secretion the adjacent parts of the external skin; thus we find that a scrofulous conjunctivitis, otitis or coryza is generally attended by an eczema either on the cheeks or about the entrance to the ear or on the upper lip. Bronchial and intestinal catarrhs, or catarrhal affections of the urinary or sexual organs of scrofulous individuals, are generally of an obstinate character.

The scrofulous affections of the *joints* manifest themselves either as dropsical effusions, or as the so-called white swellings; or even as suppurating processes, constituting caries of the bone-ends and destruction of the capsular ligaments.

The *bones* themselves are attacked by inflammation of their texture or lining, constituting either osteitis or periostitis, or caries or necrosis, or all combined.

Scrofulous affections of *the organs of sense* manifest themselves in the *eyes*, either as inflammation of the Meibomian glands, or as conjunctivitis or corneitis, which latter not unfrequently leaves spots and cicatrices upon that organ behind; in the *nose*, as obstinate coryza, or, although only in quite rare cases, as lupus; in the *ears*, as otitis, which may terminate even in destruction of the petrous portion of the temporal bone.

The greatest nutritive disturbances are sustained by the *lymphatic glands* of scrofulous individuals. Everywhere, where there is an inflammatory process of the skin or in the mucous membranes, we find the adjacent lymphatic vessels and glands participate in that process. The glands swell and inflame, and the inflammation spreads from the parenchyma of the glands to the surrounding cellular tissue, causing suppuration and abscesses, which are of slow growth and great obstinacy, leaving on healing almost always ugly cicatrices. We find these glandular abscesses most frequently in the cervical region. But the lymphatic glands of scrofulous individuals swell also without any inflammation of neighboring organs.

This is almost a pathognomic sign of scrofulosis. We sometimes find whole convolutes of these glands enormously enlarged. The microscope shows no foreign elements in them; their enlargement

consists therefore in a pure hypertrophy of their own cells. When they inflame and suppurate, they form, as above stated, abscesses, which break; in other cases the puriform matter becomes desicated into a cheesy mass, and may be finally transformed into a chalky substance, when it appears under the skin as a hard, uneven protruberance. Such chalky masses not unfrequently irritate the adjacent parts, and give rise to troublesome inflammation and suppuration of the glands. The main seat of these glandular swellings is also the cervical region, especially behind the ears and under the lower jaws, extending sometimes as far down as the shoulders. But the bronchial and mesenteric glands also are not unfrequently the seat of this nutritive scrofulous derangement.

Scrofulosis is *inherited* as well as *acquired*. *Inherited* from scrofulous parents; also from parents suffering with tuberculosis, carcinoma or tertiary syphilis; or from parents of advanced age; or, finally, from parents who are too near relatives. Still, it must be observed, that quite a number of children of parents, as described above, are found entirely free of any scrofulous taint, whilst on the other hand congenital scrofulosis is met with in children whose parents belong to none of the above-specified descriptions. *Acquired* it may be by poor or faulty diet, or by the want of exercise and fresh air; frequently by the joint action of different unhealthy influences.

Its course is always chronic; sometimes periodically improving, and then growing worse again. Its worst feature is its tendency to make children prone to the worst forms of illness of childhood, such as croup, hydrocephalus and tuberculosis, with which they combine and which they aggravate. Statistics show that most of the victims of these diseases are scrofulous children.

Therapeutic Hints.—Compare, in general, as the most important remedies, Alnus rubra, Asa fœ., Aurum, Badiaga, Baryt. c., Bell., Calc. c., Calc. phos., Cistus, Con., Hepar, Jod., Lyc., Merc., Natr. m., Rhus t., Sepia, Silic., Sulph.

For special hints, reference is made to the special ailments under their respective heads.

FEVER.

Fever is characterized by these two points: an increase of temperature of the body and a rapid consumption of bodily substance.

Without an increase in the natural heat of the body, there is no fever. It is necessary, therefore, to know something about—

Clinical Thermometry.

The *normal temperature* of a healthy person ranges between 36, 25° and 37, 5° C.; the difference never exceeds 1, 25° C., and only seldom reaches these extremes. This temperature is nearly the same in all climates, and keeps its standard alike in summer and winter. Its daily oscillations are most marked after meal-times, when there is always a slight *rise* of the temperature. The mean temperature we find a short time before the main meal, its maximum about four hours after the main meal, and its minimum in the night hours, ranging, in most cases, between 36°, 39 and 37°, 14 C. I shall, in expressing the degrees of temperature, use the scale of Celsius, which is centigrade and suits scientific purposes best. It is used exclusively by German observers, by whom this important means of diagnosis and prognosis has been most developed; and foremost is Professor Wunderlich, of Leipzig, who has in his Clinic collected a vast number of important facts relating to this branch of clinical observations. Reaumur's thermometer has the same fixed points as that of Celsius—congealation and ebullition of water—and it differs from the centigrade only in this particular: the interval between the congealing and boiling points of water is divided into eighty instead of one hundred degrees. The thermometer of Fahrenheit, which is the one exclusively used in this country, takes an artificial, much lower start, namely, that degree of coldness which is produced by a mixture of snow and muriate of ammonia, but running up, like the others, to the temperature of boiling water. This interval is divided into 212°, so that the point of congealing water, or the first fixed point of the two others, corresponds to 32° Fahrenheit. To convert the degrees of Celsius into those of Fahrenheit, multiply by 9, divide the product by 5 and add 32. To convert Fahrenheit's into centigrade degrees, subtract 32, multiply by 5 and divide by 9. The same process converts the degrees of Reaumur into Fahrenheit's, and *vice versa*, if we divide or multiply by 4 instead of by 5.

In order to ascertain the degree of temperature of a person, it is sufficient that the bulb of the instrument be held for five or ten minutes firmly in the hand, or, what is much more preferable with patients, to insert the bulb into the axilla, taking care that it be entirely surrounded by the adjacent parts. This is easily secured by slightly pressing the upper arm against the chest. In this way the instrument is kept in a firm position, and after the lapse of five or ten minutes the quicksilver partakes of the same degree of warmth as the surrounding parts, and its expansion can easily be read on the scale of the instrument. For clinical observations it is entirely sufficient that the degrees of the scale be subdivided into fifths, which are quite discernible, and allow even a still further subdivision into tenths.

The temperature of the sick varies considerably from that of persons in health. Its *maximum*, by which life was still sustained, amounted to 41°, 75 C.; its minimum to 33°, 5 C.

The following shows the highest extremes to which temperature in some diseases attained:

Intermittent fever, sometimes, 41, 75°.

Acute endocarditis, pyæmia and puerperal fever, 41, 5°.

Pneumonia, sometimes, 41, 4°; generally, 40—40, 6°; often only 38, 8°—40°; seldom under 38, 8°.

Variola, eruptive stage, 41, 25°.

Meningitis acuta, 41, 2°.

Erysipelas of the face, 41, 1°.

Typhus abdominalis, 41, 5°.

Scarlatina, 41, 1°; usually, 40—40, 9°.

Measles, 39, 4—40°; even 41°.

In all other febrile diseases the temperature rises rarely over 40°.

The lowest extremes of temperature are found in cholera, 33, 75°—32, 5°; in pyæmia and puerperal fever after a preceding high temperature, 33, 7°; in single cases of pneumonia and erysipelas, it sometimes falls suddenly for a short time from a previous great height to 35, 6°. Anæmia, marasmus, icterus and tuberculosis, when free from fever, show a normal temperature, and if below the normal standard, its decrease amounts to only a few tenths. In cyanosis, in consequence of heart disease, without inflammatory complication, the temperature may sink to 35, 25°.

As a general rule it may be said that the increase of temperature is attended by a corresponding *frequency of the pulse*, and further, that the temperature rises *higher* the *nearer the disease draws to a fatal issue.* Only in fatal cases of meningitis tuberculosa, it has been observed

that the temperature lowers towards the end, whilst the frequency of the pulse increases.

In scarlatina it may rise to 43, 25°; in pyæmia to 43°; in icterus gravis to 42, 5°; in erysipelas to 42, 5°.

It is remarkable that in disease the temperature of the body rises and falls quite rapidly, whilst in health it shows such a persistent evenness. So is it not at all unusual to find in an attack of intermittent fever the temperature to rise for 5° C. in two or three hours, and to fall again, not evenly, but in starts—step-like—to the normal standard within eight or ten hours. During the chilly stage the temperature has already risen to at least one degree above its normal state, and we may predict a chill in any fever-patient, if we find a sudden rise of the temperature—say one or two degrees—within one hour. This chill will be the more severe the quicker and greater is the rise of temperature. A temperature of 40–41, 25°, if it continues uninterruptedly for some weeks, leads certainly to death; if interrupted by remissions, either in the morning—the most frequent—or at other times, it may be borne for months.

A higher amount of heat of the body than normal is always attended by a *consumption of bodily substance*, and this is the second characteristic feature of any kind of fever. This loss of substance is not yet fully explained. We only see that the fatty constituents of the body lessen more and more; also that nitrogenized substances are discharged with the urine, which contains more urates, especially in those graver forms of fever, like typhus, pneumonia, scarlatina and intermittents; and that, in so-called hectic fevers, colliquative sweats consume the patient almost visibly from day to day.

Crisis and Critical Days.

Already Hippocrates, in the twenty-fourth aphorism of the second book, teaches in regard to critical days as follows: "Of seven days, it is the fourth that is indicative. With the eighth day begins the second week. The eleventh again must be observed, because it is the fourth day of the second week. So also must be noticed the seventeenth day, as it is the fourth from the fourteenth and the seventh day from the eleventh." And in aphorism thirty-six, in the fourth book, he says: "Such sweats, which occur in fever-patients on the 3d, 5th, 7th, 9th, 11th, 14th, 17th, 21st, 27th, 31st or 34th day, are salutary; because they bring on a favorable turn in the disease. If sweats, however, occur on other days, they denote exhaustion, obstinacy, and relapse of the disease."

These remarks are no doubt the result of a large amount of observation on fever-patients, which, having been left to nature, afforded a clear basis for observation. As such, they have been verified up to this day. As the most important of these critical days are acknowledged the 3d, 5th, 7th, 13th and 21st. Why is it that these days should have more importance in the course of a disease than others? Is there any natural connection between these odd numbers and the diseased states of the body? The old school has acknowledged the Hippocratic facts, but has never succeeded in solving the perplexed question. Just as many other things, which belong to the interior vital workings, could not be solved until the higher light of Homœopathy had been made to shine upon the organism, so also had this problem to wait until Dr. Grauvogl caught the seemingly loose and unconnected threads between odd days and certain developments in disease, and showed their legitimate connection by nature's own laws. I shall now try to condense his views on this subject as he has set them forth elaborately in his "Lehrbuch der Homœopathie."

According to physiological experiments it appears that a living organismus, when it is subjected to a starving process, does not lose its bodily substance evenly, but rather periodically, so that its greatest losses always fall upon the fifth, eighth, and thirteenth day. Thus the operations in a living organism differ essentially from mere mechanical or chemical operation. If you, for example, expose a vessel with water to an equally dry atmosphere, it will lose its contents by evaporation evenly, just so much an hour. The living organism does not. It regulates its expenditures, or its losses, according to its own laws; which allow its receipts and expenditures to oscillate between a certain boundary, and make its operations to go on in regular periods. These *periodical fluctuations* are, therefore, the law of *normal life*, part and portion of all its evolutions in health and disease; and are not peculiar to states of disease. When, therefore, in *diseases* on the third, fifth, seventh, thirteenth, twenty-first, and thirty-fifth day, a greater amount of losses sets in in the form of excretions, such as sweat, flow of urine, diarrhœa, &c., which is called the *crisis*, it is nothing more nor less than the same periodic oscillation which is going on continually in the living organism, and which becomes more conspicuous only in disease, because it is frequently followed by a decided improvement or death.

It necessarily must become more conspicuous, because this periodical loss is added to the extra consumption, which is a condition of the acute disease. If the physical state of the patient be such as to

endure both, he, of course, must feel better the next day, when the periodical acme ceases; and he *dies*, if his physical power cannot endure the united action of both.

Thus the critical days of the disease are nothing more nor less than the normal, periodical fluctuations of the living organism, with which they correspond; and the *crisis* is that critical day with its normally increased excretions, which falls, together with the height of the disease. These observations are corroborated by the following facts: that the so-called *crisis* does *not* appear when, during the course of a disease, the organism is *weakened by improper medication*, because then the natural periodic fluctuation is disturbed and destroyed; and it does *not* appear *when, by the application of the proper remedy*, health is restored; because the periodic fluctuation alone is not conspicuous enough to be observed.

It is, however, never wanting when the disease runs an undisturbed course; and, in so far, it is an important means to distinguish between a successful and an unsuccessful treatment. This is the theory of Grauvogl.

It may be proper to add some further conclusions as to the importance of watching the critical days during homœopathic treatment.

1. The right remedy cures a disease without a crisis; and thus we have an indisputable proof that the selected remedy *was the* remedy.

2. Aggravations after a remedy, when they occur on critical days, need not be the result of the remedy, as the conjoined action of the disease and the periodical oscillation alone will cause them naturally.

3. When, after the administration of a homœopathic remedy, a crisis takes place notwithstanding, we may be sure that we did not "hit" the case, and that the patient got well without our aid.

4. When no crisis appears, and the patient gets worse and worse, it is clear that we did not find the right remedy, and we may even have spoiled the case by wrong means.

Lastly, it seems to explain the observation that in most chronic cases the well-selected remedy develops its action visibly not before the eighth day, and that we then ought not to disturb its action either by repetition or change, before the thirty-fifth day.

Intermittent Fever, Fever and Ague.

This fever is caused by a poison which, under certain conditions, originates in marshy lands, swamps, in low regions near rivers, in newly-settled places which just came under the hand of cultivation;

in the neighborhood of canals when first dug; in regions which seemingly lie dry, but contain a great deal of under-ground water; the dryer the surface the greater the effluvia from underneath the porous and cracked crust. This poison is called *swamp-miasma*, or *malaria*. Its nature is entirely unknown, but differs totally from typhus, small-pox, scarlatina, and measles virus, as it never is propagated or carried from one person or place to another. Although swamps, damp, low regions, &c., are necessary for its development, yet they seem not the only conditions under which malaria is generated. Neither does the heat of the sun, the decay of vegetable substances, explain fully its presence here and its absence there; because there are large tracts of land where all these conditions exist without any sign of the miasma; whilst, on the other hand, we find small, confined districts in which ague prevails every spring and summer. Another peculiarity of the poison is, that it seems to spread horizontally, so that it is often prevented from spreading further by a wall, a hedge, unless carried over these obstacles by a blast of wind. In those places where the miasma develops itself, ague prevails *endemic;* but how widely-spread *epidemics* of intermittent fever originate is wholly unexplainable. So, also, have great ague-epidemics been the forerunner of the Asiatic cholera; in hot climates both are often found together, and still more frequently go hand-in-hand dysentery and ague; all which are facts we cannot explain. Quite inexplicable is also the occurrence of *sporadic* cases in places where the miasma never prevails, and the attacked person had never been in a malarial region.

The liability to invasion by the miasma is a very general one; no age or sex being exempted. Unlike small-pox, scarlatina, &c., the liability to repeated attacks increases after the first invasion. Persons thoroughly saturated with the poison may not suffer any more with acute outbreaks of chills and fever, but are more subject to a chronic enlargement of the spleen and a malaria cachexia.

The time of *incubation* is not known with certainty; in some cases the poison, when taken, seems to develop its consequences at once; and in others it seems to linger in the system several but not more than fourteen days. Before, however, it produces its own characteristic type of *paroxysms* of chills and fever, with intervals of immunity—*apyrexia*—it often manifests itself for a while only as a general indisposition—a general malaise and disturbance of different functions.

The real paroxysm of an intermittent fever consists of three stages—the *chill*, the *heat*, and the *sweat*.

The *chilly stage* may last from a few minutes to full three hours. During this stage the appearance of the patient is remarkably altered; his whole volume seems to shrink; his face appears sunken, his nose pinched, and the rings on his fingers (if he wears any) are quite loose. The arterial blood is prevented from reaching the surface, whilst the venous blood is stagnated in the capillaries; this makes the skin pale and the lips and nails blue. The whole surface is cold, and covered with the well-known appearance of goose-skin, (cutis anserina.) The internal temperature, however, increases rapidly from two to three degrees and even more. The attending symptoms of this stage are numerous and various—headache, thirst, colic, cough, oppression, back-ache, &c., &c.; either one, or the whole, or still others, may exist in a lighter or graver degree or not at all at that stage.

The *stage of heat* creeps on slowly, still intermingled with chilly sensations. Finally, the whole body is in a perfect glow; the temperature rises still higher and remains so until near the end of this stage. There have been cases observed where the thermometer rose to 41, 75° C. Physical examinations may also detect a swelling of the spleen which, having commenced during the chill, reaches its height during this stage. The heat generally lasts from a few to eight, or even twelve hours. Here, too, as in the chilly stage, the attending symptoms vary in number and character in each individual case.

The third stage, that *of sweat*, finally closes the paroxysm, and, in most cases, greatly relieves the sufferings of the patient. The temperature sinks step by step till at last the patient feels more or less completely well again. There are, however, enough cases in which this last stage is likewise attended by a number of various symptoms, which, indeed, are important, like those of the first and second stage, in regard to the selection of the remedy, but have no particular bearing on the diagnosis of the case.

The *apyrexia* which now follows is very seldom entirely free of all morbid manifestations, and these are likewise numerous and various, and for the observant homœopathic physician of the highest importance. Just these manifestations may present to him the hints which will lead him to the discovery of the required remedy of the case.

When an intermittent fever develops its paroxysms in these three stages, and in this order, it is called *intermittens completa;* when,

however, one or the other of the stages is wanting, it is called *intermittens incompleta;* and when the order of its stages is reversed, so that, for example, the paroxysm commences with sweat and ends with the chill, it is called *intermittens inversa.*

The apyrexia is, in different cases, of different duration. It may last only six, eight or twelve hours, so that the new paroxysm sets in after twenty-four hours from the one preceding, then it is called a daily or *quotidian fever;* if twice twenty-four hours elapse between the paroxysms, it is called a *tertian fever;* and if three times twenty-four hours intervene, it is called a *quartan fever.* Sometimes it recurs only every seventh day—*intermittens septiana.*

The most frequent are the quotidian and tertian. Sometimes it happens that the paroxysms keep no regular times; they either set in each time earlier, (*anticipating,*) or later, (*postponing.*) In such cases it may come to pass that the original type is altogether changed into another; for example, a quotidian by postponing into a tertian, or a tertian by anteponing into a quotidian. When a fever-paroxysm lasts so long that its end reaches to the beginning of a new paroxysm, it is called a *febris intermittens subintrans.* When, however, the intervals of a quotidian, tertian, or quartan fever are again interrupted by another paroxysm, then it is called a *frebris intermittens duplicata.* The double quotidian consists of two paroxysms within twenty-four hours, the intervening being generally lighter than the original. The double tertian has one paroxysm every day, mostly at different hours, and again the intervening lighter than the original; whilst the double quartan has two paroxysms in three days, and in this way, that two successive days are fever days, and the third day is free.

A long-continued, oftentimes suppressed intermittent fever frequently terminates in dropsy in consequence of existing functional disturbances of the spleen, which gradually become an organic lesion, or in chronic parenchymatous nephritis, or scorbutic affections and general ague cachexia.

Therapeutic Hints.

Acon., in recent cases of young individuals of a full habit; all the stages must be sharply marked, with a prominent congested state of the head and chest. The pulse is full, hard, and frequent. During the *chill* internal heat, with great anxiety, sensitiveness and restlessness; the pupils are contracted. The *heat* is confined mostly to the head and face; great thirst for cold water and inclination to uncover.

The *sweat* is most prominent on the parts covered, and is attended with earache and profuse micturition.

Ant. cr., predominant gastric symptoms: thick-coated tongue; bitter taste; nausea; belching; vomiting; loss of appetite; little or no thirst; pain in the bowels, diarrhœa or constipation. Sweat breaks out during the heat but soon disappears, and is again followed by dry heat.

Apis, according to Wolf, it is one of the most important remedies in all kinds of intermittent fevers, and indeed it has been used everywhere with great success. Chill about three or four o'clock P. M.; worse in the warm room or near the stove; renewed chilliness from slightest motion, with heat of the face and hands. *Heat*, especially in the chest pit of the stomach, bowels, female organs, and hands, with muttering and unconsciousness; diarrhœa; shortness of breath; drowsiness or sleeplessness. *Sweat* alternates with dryness of the skin. During the *apyrexia*, pain under the short ribs, worse on the left side; great soreness of all the limbs and joints; great debility, enlargement of the abdomen; swollen feet and scanty urine. Apis is therefore indicated, not only in recent but also in protracted and badly-treated cases. After it Natr. mur. follows well.

Arn., before and during the chill great thirst; drinks a great deal, and vomits afterwards; pain in all the bones; bed and sofa feel too hard; the chill is felt worst in the pit of the stomach; cold hands and feet, with heat in the head and face, and redness of one cheek; *heat*, with indifference, stupor; drinks less; the *sweat* smells sour; during the *apyrexia* stitching pain in the region of the spleen; soreness of the spleen on pressure; aching in all the limbs as though beaten.

Arsen., intermittens incompleta. *Before* the attack: vertigo; headache; yawning; stretching; general discomfort; weakness; pain in the pit of the stomach and empty eructations; cutting pain in the bowels. The *chill* is frequently intermixed with heat; or heat and chilliness follow each other in rapid succession; or the patient feels cold inside and burning hot outside. During the chill: generally no thirst; if there be any, drinking increases the chill and causes vomiting; oppression and spasms in the chest, with hacking cough; bloating of the pit of the stomach; pain in the pit of the stomach; anxiety, restlessness; blue nails. The *heat* is either wanting, or mixed up with the chill, or is very great, with delirium, unconsciousness and headache; restlessness; anxiety; pulsation through the whole body; tension and pressure in the left hypochondrium; burning in the

stomach; mostly great thirst, but drinking little at a time; oppression and short breathing; palpitation of the heart. The *sweat* sets in some time after the heat, or does not appear at all; during the sweat the thirst is often the greatest, and the patient drinks large quantities of water; the symptoms of the former stages become ameliorated. The *apyrexia* is never clear. The face is pale, sunken, earthy, sallow. bloated; the lips are pale, cracked, swollen and crusty; the tongue is white and dry, or yellowish-coated; the taste is gone, without bad taste, only after eating bitter taste; the appetite is sometimes increased for a while, satisfying it causes heat and nausea, and not satisfying it causes an unpleasant sensation of discomfort; the hypochondriac regions are swollen, especially the left, the abdomen is bloated; the stools are diarrhœic, fetid; the urine is rather scanty and turbid, the feet are œdematous; the skin is pale, often covered with cold perspiration; there is sleeplessness, especially the night before a new paroxysm, and great sinking of general strength.

Bell., the *heat* predominates, with vertigo, hallucinations, delirium, restlessness, anxiety; drowsiness, with inability to go to sleep, or sopor; headache; injected eyes, and sensitiveness to light; red cheeks; throbbing of the carotid arteries; choking sensation in the throat; great thirst and dryness of the mouth and throat; palpitation of the heart, painful swelling of the spleen; constipation; great irritability of temper, or else tearful mood.

Bryon., the *chill* predominates, only exceptionally the heat; great thirst during the chill, still greater during the heat; the sweat lasts long. There is, as the most important leading symptoms: stitching pain in the sides of the chest, with hard cough; stitching pains in the hypochondriac regions and in the abdomen; rheumatic pains in the limbs; all worse from motion.

Cactus gr., regular paroxysms at 11 o'clock A. M. or P. M.; first chill, then burning heat, with headache, coma, stupefaction, insensibility; thirst, shortness of breath, inability to remain lying. The sweat is profuse, and attended with inextinguishable thirst. The apyrexia is complete.

Calc. c., chronic cases; thirst during the chill. General indications: hardness of hearing; pot-belliedness; hard, bloated stomach; enlarged spleen; diarrhœa, white, undigested; monthly period too early and too profuse; glandular swellings about the neck; altogether scrofulous diathesis.

Caps., *chill*, mostly with thirst, and worse after drinking; the chill commences in the back and spreads all over; after the chill *sweat;*

or *heat*, with sweat and thirst at the same time. During the chill: giddiness and excruciating tearing pains in the back and limbs, extorting cries, and causing the patient to bend together like a hedgehog. During the heat: cutting pain in the bowels, and slimy, burning stools, with much pressing and bearing down; headache.

Carbo veg., irregular paroxysms, sometimes commencing with sweat, followed by chill. Before the attack toothache, headache and pain in the limbs. During the chill great thirst. Heat and sweat frequently mixed together, with evening hoarseness, dizziness, red face, nausea, but no thirst. The sweat is sour and sometimes very profuse. Afterwards long-continued headache; heat and burning in the eyes; yellow complexion; liver-spots in the face; belching; bad smell from the mouth; stomach bloated; spleen swollen and painful; abuse of quinine.

Cham., *heat* and *sweat* predominate, and often together; red face, or only one cheek red and the other pale; sweat especially about the head, and mostly hot. The tongue is red in the middle and white on the sides, or white in the middle and red on the edges; bitter taste; bitter vomiting; great oppression about the heart; diarrhœa. The patient is very irritable, excited, complaining, with great restlessness and anxiety.

China, the paroxysms come mostly at irregular hours, with thirst *before* (not during) chill or heat and during the sweat; they are mostly preceded by palpitation of the heart with anxiety; sneezing; nausea; hunger; pressure in the stomach; pain in the bowels and jerking, tearing headache; pain in the limbs and great debility. During the fever the veins appear greatly enlarged, and there is great congestion to the head, with redness and heat of the face, even with chilliness and coldness of other parts of the body. The sweat is sometimes only partial and cold; for example, on the forehead; at other times it is profuse, and almost always attended with thirst. In general the patient sweats easily, especially at night during sleep; there is swelling of the liver and spleen, painful to motion and pressure; a characteristic weakness, exhaustion and cachectic appearance, a sallow yellowishness of the skin, not only in the face but also on the chest and region of the stomach, and different anæmic and dropsical symptoms. The urine is scanty and turbid, with a thick yellowish or brick-dust sediment, or a sediment of little crystals. The presence of swamp-miasma is another indication.

Chinin. sulph., regular paroxysms at the same hour, and clear intermissions; real thirst, mostly only during the sweat. During the

paroxysm *pain in the dorsal vertebræ on pressure;* pain in the region of the liver and spleen on bending, taking a deep breath, coughing; the urine gives a voluminous, brick-dust-like or fatty sediment, or contains crystals of urates; ringing in the ears, with dizziness and enlarged feeling of the head.

Cimex, *before* the *chill* thirst and heaviness in the legs. The chill *commences* with clenching of the hands and violent raging; it is *attended* with pains in all the joints; sensation as if the tendons were too short; the knee-joints are usually contracted, so that the legs cannot be stretched; the chest feels oppressed, obliging one to take a long breath frequently; irresistible sleepiness; it *ends* with a tired feeling in the legs, obliging one to change position constantly; with thirst; drinking, however, causes violent headache; continuous dry cough; oppression of breathing; heaviness in the middle of the chest; anxiety. Abstaining from drinking ameliorates all this. The *heat* is attended with gagging; the œsophagus feels constricted, and the water drank goes down only at intervals; no thirst. The *sweat* is mostly on the head and chest, accompanied by hunger.

Cina, thirst only during the chill, or only during the heat. Nausea, vomiting, diarrhœa, pain in the stomach and abdomen may set in at any time, and soon be followed by a clean tongue and ravenous appetite. The face is puffed and pale even during the heat; the pupils are much enlarged, and the child often picks at the nose.

Diadema, paroxysms every day or every other day at precisely the same hour; chill predominating; constant chilly feeling; always worse in rainy, cold days; menses too early and too profuse; enlargement of the spleen.

Eupatorium perf., long before the chill great thirst, which continues through chill and heat; after drinking vomiting; the paroxysms usually occur in the morning, about seven or nine o'clock; they are attended with intense aching in the back and limbs, as if the bones were broken, and with a number of gastric or so-called bilious symptoms; the sweat is generally not very prominent, or even wanting, but sometimes drenching, and the intermission is sometimes marked by a loose cough.

Eupatorium purp., the paroxysm comes at different times in the day, every other day; *chill commences in the back* and then spreads over the body; violent shaking, with comparatively little coldness; thirst during chill and heat; violent bone-pains during chill and heat.

Ferrum, similar to Arsen. and China, it will be frequently of service in protracted and badly-treated cases by quinine, which are

characterized by anæmia and total prostration of the reproductive sphere of the system. We observe great paleness of the face, which, however, may flush up from any excitement to a fiery redness of short duration; pale, almost white; paleness, whiteness of the inner surface of the mouth; vomiting of every thing that is eaten without being digested; swelling and hardness in the hypochondriac regions; great weakness and emaciation; dropsical swelling of the feet; frequent congestion of the lungs; continued shortness of breath; nun's murmur in the veins.

Gelsem., from all that is published about this valuable agent I cannot make out a definite sphere of its action. It seems to be especially suitable in evening paroxysms, when the chill begins in the extremities; where the heat is attended with nervous restlessness; delirium; mental anxiety or agitation; vertigo; a curious sensation of *falling;* sensitiveness to light and sound; partial blindness or deafness; or where there is a want of distinctiveness in its several stages, the whole presenting an adynamic condition of the system.

Hepar, bitter taste in the mouth; bilious vomiting; diarrhœa; *itching, stinging nettlerash* before and during the chill; fever-blisters around the mouth; tettery eruptions in the chest; previous abuse of mercury.

Ignat., thirst *only* during the *chill*, or in short spells, independent of any stage. The chilliness is relieved by the external application of warm things; external heat, or heat in some, and coldness of other parts of the body; sometimes with pain in the bowels; afterwards sleep and sweat. The paroxysms are sometimes accompanied with spasmodic symptoms; heaviness of the head; aching pain in the occiput; vomiting and pressive pain in the pit of the stomach. The paroxysms are apt to postpone or antepone.

Ipecac., predominance of gastric symptoms during the paroxysm as well as during the apyrexia. It begins chiefly with yawning, stretching, and a collection of saliva in the mouth; then follows the chill, with nausea, vomiting, diarrhœa, and great oppression of the chest, with heaving. The three stages may be very strongly marked or very light; the thirst is generally quite inconsiderable in all of them. The apyrexia has the same gastric symptoms, especially a marked sensation of relaxation of the stomach, as though it were hanging down; entire loss of appetite. The spleen is little if any swollen. Miasma; after the abuse of quinine and arsenicum; after faults in diet.

Laches., one of the most important remedies after the abuse of

quinine. The paroxysms are mostly in the afternoon, with pain in the small of the back and limbs; restlessness; oppression of the chest; jerking; headache; red face; talkativeness.

Lycop., where there are other chronic symptoms—cough, with thick, yellow, salty expectoration; oppression of the chest; pain in the left side; palpitation of the heart; pale face, often with circumscribed redness of the cheeks; sour vomiting; bloatedness of the stomach; rumbling in the bowels; great debility; the sweat is often sour and profuse, following sometimes immediately upon the chill, and at other times not until some time after the heat; after the sweat, thirst.

Mangan., incomplete intermittent, consisting of only heat and sweat, with moderate thirst.

Mezer., incomplete intermittent, consisting of chill with thirst, and sweat with sleep.

Natr. m., one of the most important of all in recent as well as in inveterate and badly-treated cases. Hard chill very often at 11 o'clock A. M., with great thirst which continues through all stages. The heat is characterized by the most violent headache. There soon appears an eruption of hydroa or fever-blisters, which cover like pearls the upper and lower lip. During the apyrexia sallow complexion, dry, white-coated tongue; bitter taste; water tastes bad; loss of appetite; after eating, sour belching and vomiting; pressure in the stomach; swollen stomach; pain in the region of the kidneys; cutting pain in the urethra *after* micturition.

Nux v. is characterized by great prostration and paralytic weakness from the beginning. Hard *chill* with bluish face and blue nails; stitching pain in the abdomen; spasmodic drawing and stiffness of the lower extremities; great thirst; the *heat* is great, and notwithstanding this the patient covers himself all over, because uncovering or the slightest motion makes him feel chilly; headache; great thirst, especially for beer. Both chill and heat are accompanied with gastric and bilious symptoms. During the sweat the painful symptoms gradually subside. During the apyrexia, headache; yellowish complexion; belching; loss of appetite; nausea; vomiting; constipation; liver and spleen swollen; cough; debility; soreness of the spine.

Opium, sleep during chill and heat; during sweat he feels still burning hot; children and old people.

Pulsat., the several stages are in general not very violent, and mostly unattended by thirst; or thirst only during the heat; or the several

stages are mixed up. The paroxysms set in frequently (though not always) in the evening, and last through the night. Characteristic features: tearful and peevish; headache during the intermission; face pale or yellow-greenish; tongue moist, coated, with bad taste; loss of appetite and thirst; nausea; vomiting of slime and bile; spleen enlarged; stools diarrhœic, slimy, watery, at night; profuse, watery urine; suppressed or scanty menses; pain in the chest and cough, with pain in the head and pit of the stomach; frequent palpitation of the heart; murmur in the jugular veins; constant chilliness and drowsiness; chlorotic state of the system.

Rhus t., before the chill; stretching of the limbs; yawning, with a feeling in the maxillary joint as if sprained; thirst; cough, with sweetish, foul expectoration. Chill in some parts, and in others heat; or hard chill, with aching in the small of the back, drawing in the limbs, and formication in the fingers; with restlessness and constant change of position. The heat is sometimes before and sometimes after the chill, and often attended with nettle-rash; pain in the bowels and diarrhœa. The following sweat is often profuse and sour. The paroxysms set in most frequently in the evening and last through the night; they generally return every day, but seem altered every other day.

Sabad., intermittens incompleta, consisting of chills only; or intermittents with predominating chill, and thirst between chill and heat; the paroxysms occur precisely at the same hour; sometimes they are accompanied with morbid hunger in alternation with loathing of food; during the apyrexia there is a constant chilliness; sometimes cough with heavy breathing and pain in the chest.

Sambucus, profuse, debilitating sweat, lasts through the apyrexia; commences in the face, is worse whilst the patient is awake, disappears and changes to a dry heat when he is falling asleep.

Sepia, chronic cases, with one or the other of the following symptoms: frequent flushes of heat; paralytic sinking down of one of the upper eyelids; yellowishness of the white of the eyes; brownish-yellow saddle across the bridge of the nose; yellowishness around the mouth; loathing of meat and milk; diarrhœa after drinking milk; pain in the liver on moving; bearing down towards the genitals; palpitation of the heart; tettery eruptions; the coldness begins in the feet and rises upwards.

Silicea, in scrofulous subjects.

Sulphur, like Sepia, in chronic cases; especially when rooting in the soil of suppressed itch or other cutaneous eruptions, with one or the

other of the following symptoms: heat on the top of the head, with cold extremities; red lips; red tip of the tongue; worse always after eating; sudden attacks of faintness, with hunger in the forenoon; costiveness, or else looseness of the bowels early in the morning, driving out of bed; hemorrhoidal complaints; leucorrhœa; cough when lying down in the evening; feverishness through the night; complete sleeplessness; itchiness of the skin.

Tart. em., thirstlessness during chill and fever; shuddering with sleepiness; heat with sopor; sweat with sleepiness; fainting; anxiety; and pain in the lower extremities.

Thuya, according to Wolf, if Apis is not sufficient, and the complaint originates in a chronic gonorrhœal contamination of the system; only the uncovered portions of the body perspire; those which are covered are dry and hot.

Veratr., chill and coldness predominate; with sticky, cold perspiration; heat not so marked; the sweat profuse, often cold and long-continuing. Attending symptoms: great exhaustion; sinking of strength; nausea; vomiting; diarrhœa, or obstinate constipation; cramps in the limbs. It is indicated, therefore, in the most pernicious kinds of intermittent fevers, and those which occur during the prevalence of cholera.

Pernicious Intermittent; Remittent and Continuous Malarial Fevers; Congestive Fevers.

These fevers are frequently met with in the south and southwest of the United States, and in the tropical countries. They are all of a malarial origin; which is proved by the fact, *that they occur exclusively in regions where ague prevails;* in regions, therefore, which, by their conformation of soil and climate, constitute the necessary conditions for the development of the miasma; and it is further proved by the fact, *that remittent fevers, when improving, gradually change into the intermittent type.* Hence remittent fevers are only graver forms of the effects of the same unknown virus, called miasma, that causes the *ague;* and this corresponds again with the fact that we find remittent fevers oftener in such regions in which the *common intermittent cases are likewise much more severe* than in other regions.

The *pernicious intermittent* is characterized either by a higher virulence, intensity, and longer duration *of all its stages*, so that the end of an attack reaches into the beginning of a new paroxysm; *febris intermittens subintrans;* or the *heat* alone increases to such an in-

tensity as to induce delirium, stupefaction, and coma; simulating all the appearances of typhus or malignant infectious diseases: *febris intermittens comatosa;* or the *chilly stage* predominates to such an extent that the pulse becomes smaller and smaller, the impulse of the heart weaker and weaker, the stagnation of the blood in the veins greater and greater, causing cyanosis, and the temperature of the body lower and lower, to perfect collapse, simulating thus closely the appearance of cholera, which may indeed prevail simultaneously at the same place: *febris intermittens algida.*

Remittent fever has no apyrexia, but in place of it there is merely a slacking off of the fever; which is again succeeded by another exacerbation. If it be a *continued fever* there is not even such a remission of its violence. These *remittent* fevers may be divided, as in the case of intermittents, into three forms:

1. The *lightest form* is characterized by commencing with a chill, which is followed by a violent fever and many gastric symptoms; the spleen is swollen; there is slight icterus; irregular and whitish stools; herpes labialis; headache; pain in the limbs; dizziness; ringing in the ears; epistaxis; bronchial irritation; great debility. It might be confounded with the beginning of typhus if it were not for the fever-blisters around the mouth and the exacerbations, recurring at first irregularly, but later, regularly, which gradually assume a regular intermittent type. It may last from several days to three weeks, and corresponds to the *febris intermittens subintrans.*

2. A *graver form* is when the remissions gradually cease and the fever becomes continuous. The whole condition now resembles very much that of typhus. The patient is delirious or lies in a stupor; his tongue is dry and his spleen swollen. In addition to all this there may be icterus or symptoms of pneumonia, dysentery, &c. This form lasts from eight to fourteen days, and, if getting better, it works over into an intermittent type; if fatal, the patient dies in a comatose condition, corresponding thus to the second form of a pernicious intermittent, *febris comatosa.*

3. The *gravest form* is characterized by a high degree of adynamia. Such patients are deeply apathic from the very beginning, and collapse rapidly. There are functional disturbances in almost all organs. Many patients are icteric; others bleed from the nose, stomach, or kidneys; others show albuminuria or suppressio urinæ; and still others have cholera-like or dysenteric discharges from the bowels. Liver and spleen are swollen, terminating sometimes in inflammation and suppuration. The serous membranes show ex-

udates, and the external skin is covered with petechiæ or destroyed by decubitus and gangrene. This form corresponds to the *febris algida.*

Congestive fever, malignant bilious fever, typho-malarial fever, &c., are only other names for the above-described different forms of remittent malarial fevers.

Therapeutic Hints.—Compare Intermittent Fever.

The *comatose* form will require principally Bell., Opium, Tart. em., Hyosc., Lach., Stram.

The *adynamic* form especially Arn., Arsen., Bryon., Camph., Carbo veg., Chinin. sulph., Ferr., Hydroc. ac., Lach., Phos. ac., Rhus t., Veratr.

Yellow Fever.

Yellow fever is a disease of hot climates in low and level localities near the sea-coast; sometimes it develops itself spontaneously on board of ships, if they have for a long time been exposed to the temperature of hot climates, and are in conditions, such as want of cleanliness, foul water, badly-ventilated sleeping-rooms, easily decomposable freight, &c., all apt to breed pestilential poison. The virus which causes yellow fever seems to be of altogether a different nature from swamp-miasma, as it is portable from person to person, from place to place, and as it generally extinguishes the liability for a second infection, thus corresponding with the virus of measles, scarlatina, and small-pox. Like these, it prevails epidemically, but only in the hot season, and ceases with the first frost. Those most prone to its attacks are strong, young men of a full habit, and chiefly those not acclimated. Whites are more liable than Creoles, Creoles more than Negroes; Indians least. The best immunity against it is a previous attack.

The incubation is short, frequently not longer than a day or two; in some cases fourteen days.

Its course is an acute one, lasting from three to ten days, and consists of three distinct periods: 1, *The fever paroxysm;* 2, *The period of remission, with icterus* and *slowness of pulse;* and 3, *The apyretic stage, with hemorrhage,* especially from the stomach, with *suppression of urine and collapse.*

The disease is almost always ushered in suddenly by a chill, or by mere chilliness, intermingled with heat, seldom preceded by weakness, heaviness of the head, dizziness or catarrh in the head. The heat soon rises to a high degree, with dryness of the skin or sweat

which does not relieve, and a frequent, full and hard pulse. There is a severe pain in the forehead and orbits; the face is injected, turgescent, especially the eyes are red, watery, with a glistening, glassy appearance, as if the patient were drunk. Quite characteristic *is the severe pain in the lumbar region and extremities,* which keeps the patient in constant restlessness and deprives him of sleep. The appetite is gone, and there is nausea, vomiting of ingesta, great thirst, pressure and soreness in the pit of the stomach; the alvine discharges are retarded and frequently whitish; sometimes, however, diarrhœic and bloody; the urine is scanty and dark red; now and then there is epistaxis. The patient complains a great deal; moans and groans, is mentally dejected and physically prostrated, with excessive restlessness. This state of things generally lasts from two to three or four days; in severe cases scarcely one day. Now follows the *second* period.

The patient feels better; all the distressing symptoms leave and the pulse sinks down to seventy or eighty beats. In light cases this is, indeed, the commencement of convalescence. In other cases, however, the nausea and soreness of the pit of the stomach continue, the white of the eyes, skin and urine gradually assume an icteroid hue; the pulse sinks below its norm and the patient feels exhausted and shows a stupid expression of the face. All this increases in the *third* stage.

Within one or two days, the soreness in the pit of the stomach amounts to a severe burning pain; the tongue gets dry, the thirst violent, the nausea and vomiting worse. At first large quantities of a sour fluid are thrown up; by-and-by this becomes mixed with blood, until at last it consists of pure, decomposed black blood, (*black vomit;*) at the same time blood passes from the bowels, and in some cases from the nose, mouth, kidneys and capillaries under the skin, forming petechial spots. The secretion of the urine is scanty or ceases altogether. The patient is full of agony or apathic, with clear consciousness, or slight delirium; the exhaustion grows still greater; the skin darker; the temperature of the body sinks lower and lower. The patients die either in a comatose state, with delirium and convulsions, or suddenly, retaining their consciousness to the last.

This is the course of a majority of yellow-fever cases. The so-called *walking cases* are remarkable in this respect: that the patient feels merely unwell, not severe enough to lie down, until all at once he is taken with vomiting of blood and a rapid collapse.

Therapeutic Hints.

Acon., first stage; burning heat and dry skin; full, hard, quick pulse; great restlessness and anxiety; delirium at night; dizziness on rising; pain in the forehead and temples; face red; eyes injected, sensitive to light; lips and mouth dry; great thirst; nausea, vomiting; heat in the stomach; short, anxious respiration; pain in the back and extremities; great debility. Taft.

Arg. nitr., second stage; vomiting of a brownish mass, mixed with coffee-ground-like flakes. Holcombe.

Arsen., second and third stage; dull, heavy or throbbing pain in the head; face yellowish and livid; eyes dull and sunken, with dark rings around and yellow sclerotica; nose pointed; lips and tongue brown or black; vomiting, especially after drinking; black-vomit; burning or stitching pain in the epigastrium and region of the liver; great pressure in the pit of the stomach; cramp-pains in the bowels; diarrhœa, with tenesmus, or painless and involuntary; oppression of the chest, with short, anxious breathing; pulse irregular, frequent, small, trembling; coldness of the body, and cold, sticky perspiration; stiffness and lameness of the limbs; rapid sinking of strength; loss of memory; great indifference; stupid expression of countenance; delirium; loss of consciousness. Taft. Holcombe.

Bell., first and second stage; dry, burning heat, with changing pulse; sharp, stitching, shooting and throbbing pains in the head and ears; face red, shining and swollen; eyes red, glistening, staring, protruding; carotid arteries pulsating; tongue coated white, yellowish or brownish; nausea and violent vomiting; cramp-like pain in the stomach; burning and throbbing in the pit of the stomach; urine red or brown; painful heaviness and cramp-like pain in the back, loins and legs. During the remission: melancholic, dejected; much excited, with great anxiety and constant tossing about, when reaction takes place. Taft.

Bryon., second stage; headache worse from motion; pain in the eyes when moving them; the eyes are red or dull and glassy, or glistening and watery; tongue dry and coated white, or dirty-yellowish or brownish; burning thirst; vomiting, worse after drinking; fulness and oppression in the pit of the stomach and bowels; pain in the back and limbs; yellow skin; anxiety and fear about the future; loss of memory; delirium. Taft.

Camphora, when there is a severe and long-lasting chill at the commencement. Holcombe.

Canth., third stage; complete insensibility; cramps in the abdomi-

nal muscles and legs; suppression of urine; hemorrhages from the stomach and intestines; cold sweat on the hands and feet. Taft. Strangury—Holcombe.

Chamom., suitable especially for women and children with gastric irritations. Holcombe.

Carbo veg., like sulphur in cholera, so is, according to Hering, Carbo veg., that medicine which, more than any other, corresponds in the totality of its action, to yellow fever. Taft recommends it especially for the third stage, and Howard gives the following indications: hemorrhages, with great paleness of the face, violent headache, great heaviness in the limbs and trembling of the body.

Cepa is said to have cured a case of yellow fever when raging in Philadelphia; there are a good many symptoms in its pathogenesis which might suggest its further application.

Crotalus is indicated especially by the hemorrhages from the eyes, nose, mouth, stomach, and intestines. Bute.

Croton tigl., recommended by Hackett, an allopath; he saw from his doses aggravations, but afterwards rapid improvement.

Cupr., when Arsen. does not relieve the vomiting of blood. Küstner.

Ipecac., in the first stage: dizziness, chilliness, pain in the back and limbs, uncomfortable feeling in the epigastrium, with nausea, vomiting, and great weakness. Taft.

Laches., quite important in any of the stages. Küstner gave it also after previous abuse of mercury or quinine.

Merc., yellow skin; red, injected eyes, sensitive to light; paralysis of the one or the other limb; tongue moist, coated, thick and white, or dry with brown slime; pulse irregular, quick, strong, and intermitting, or soft and trembling. Drowsy or sleepless from nervous irritation; tired and weak; rapid sinking of strength; dizziness and violent headache; violent convulsive vomiting of slime and bilious matter; burning pain and sensitiveness of the stomach; constipation or diarrhœa of slime, bile or blood; coldness of the extremities with cramps. Great irritability of all the organs; anxiety and restlessness; weak memory; fears; discouragement; crossness. Taft.

Nux vom., after allopathic drugging, or in persons accustomed to drinking strong liquors. According to Taft: yellow skin, pale or yellowish face, especially around the nose and mouth; eyes injected, yellow and watery; dark rings around the eyes; tongue slimy or dry, cracked and red on the edges; thirst for beer or stimulating drinks; burning in the stomach; pressure or cramp-pain in the

stomach; vomiting of sour, bilious, or slimy substances; hiccough; dizziness or headache; trembling of the limbs; cramps in different parts of the body; contractions of the abdominal muscles; thin, slimy, bilious or bloody stools; burning pain in the neck of the bladder, with difficult urinating; coldness, lameness and cramps in the legs; cold feet. Excessive anxiety; fear of death; despondency or loss of consciousness and delirium, with moaning and groaning.

Rhus t., according to Taft: dirty-yellow color of the body; glassy, sunken eyes; dry, black tongue; talkative delirium, or coma with rattling respiration; constant groaning; torturing pain and burning in the stomach; nausea; vomiting; paralysis of the lower extremities; cramps in the abdomen; colic; diarrhœa; difficulty in swallowing; constant restlessness and tossing about.

Sulphur, melancholic; fearful; undecided; sad; absent-minded; dizziness; headache; face pale or yellowish; eyes red or yellowish; itching and burning in the eyes; noises in the ears; tongue dry, red, or with white or brown coating; aphthæ in the mouth; nausea with trembling and weakness; vomiting of sour, or bilious, or bloody and black masses; pressure in the stomach; pain in the back and loins. Taft.

Verbena Jamaicaensis. The juice of the leaves of this plant, the species of which is not properly given, is said to have cured a number of the most desperate cases.

Veratr., according to Taft: yellowish or bluish face, cold, and covered with a cold perspiration; eyes dull, yellowish, watery; deafness; lips and tongue dry, brown, cracked; difficult swallowing; hiccough; great thirst; vomiting of bile or blood; burning in the stomach; coldness of the hands and feet; trembling and cramps of the hands, feet, legs, and abdomen; diarrhœa, thin, blackish or yellowish; pulse small, scarcely perceptible, intermitting. Great exhaustion; vertigo; fear; despondency; restlessness; loss of consciousness; coma or delirium.

Besides these the following are recommended: Apocyn. andros. Cimicifuga, Eupator. perf., Gelsem., Veratr. viride.

Typhus.

Typhus means literally, *smoke, stupefaction.* In the course of time this word has been used to signify different pathological affections, all of which, however, were characterized by a *dry tongue, stupor, delirium, and great prostration.* Nowadays it has become *usus* to call typhus only two forms of low fever, namely: the *typhus exanthematicus*, or

petechial typhus, which is characterized by a peculiar eruption, and the *typhus abdominalis*, or *ileo-typhus*, which is characterized by a peculiar diseased state of the small intestines, and in this country best known under the name of *typhoid fever*.

Typhus Exanthematicus, Petechial Typhus.

This form is also known under the names of *jail-fever*, *ship-fever*, or *camp-fever*.

It is extremely contagious. Once generated, it is apt to spread to all who come in contact with the sick, or have any thing to do with the utensils, or other things used in the chamber. So it is stated from England, that at one time the physicians, students, and nurses, who had been in attendance, and the washerwomen who had done the necessary cleaning work, were all stricken down with the same malady. Into hospitals it generally is imported; on board of ships, and in jails, it frequently develops itself spontaneously. The conditions for such spotaneous development seem to consist in the want of sufficient and healthy food, in the absence of cleanliness and proper ventilation, and in great dejection of spirits. It appears, therefore, *epidemically*, when these conditions are given on a large scale; for example, when famine, or general and great calamities befall a whole nation; and *endemically* in times of war, when whole camps are illy provided with the necessaries of life, or whole cities are besieged for a long time by the enemy. In Europe it was the predominating form of typhus from the sixteenth to the commencement of the present century, when, during the Napoleonic wars, it reached its highest development. Since then it had almost entirely disappeared, until about some ten or twenty years ago it again reappeared in some isolated districts of Europe under the same conditions.

The time of *incubation* varies from a few days to a week and longer, and is attended with various disturbances, none in any way characteristic of the complaint.

The *stadium invasionis* commences with a severe shaking chill, or with several slight chilly sensations, which are followed by a continuous great heat, amounting already in the first days to 40–41° C. The patient is at once stricken down by a sense of great weakness and debility, complains of heaviness, or pain in the head, which at times is somewhat ameliorated by a spontaneous bleeding from the nose; of vertigo, flickering before the eyes and ringing in the ears. His hearing becomes impaired; his muscles are sore and painful, and

on motion his limbs commence to tremble. There he lies apathetic on his back, talks deliriously whilst being awake, or mutters in his sleep. Others, however, are intensely excited, almost wildly, scarcely to be held in bed. With all this we observe various catarrhal affections of the eyes, nose, throat, and chest, which latter is the most constant affected part, manifesting itself by a harassing, rough cough, with a scanty, tough, sometimes bloody expectoration. Auscultation reveals numerous rhonchi. The tongue looks, at this stage, white, with a pappy taste; there is, at times, nausea, vomiting, and diarrhœa. This state of things lasts about half a week, when, between the third and fifth days, scarcely later than the seventh day, the *second stage*, the *stadium eruptionis et florescentiæ* commences. We observe now, at first on the trunk, some bright-red roseola-spots, which by degrees spread over the whole body, with the exception of the face; they remain until the end of the second week, and when still longer, they gradually assume a livid aspect, become real suggillations underneath the skin, or petechiæ. The appearance of this eruption does not in the least ameliorate the situation of the patient; on the contrary he grows worse all the time; his sensorium becomes more involved; he is unable to think, gives slow, incoherent answers; is in constant delirium, either of a mild or raving nature, with constant attempts to spring out of bed and run away. After recovery the patient scarcely ever remembers any thing of this stage.

The difficulty of hearing increases, the tongue grows dry, and is covered with a brownish coating, and the respiration, although the cough has lessened materially, is quick and superficial, with increased rhonchi and a dull percussion-sound on the dependent parts of the thorax. There is almost always constipation at this stage, with involuntary discharge of urine. The heat retains its height to the latter part of the first week, when in *light* cases it generally slackens off a little, and by the seventh day shows an appreciable remission for the first time. In *severe* cases, however, the temperature of the body increases during the second part of the first week, and shows no remission on the seventh day. The spleen is considerably enlarged toward the end of the first week, and the eruption commences to grow more livid with the commencement of the second week. Now the patient lies constantly on his back, with his eyes half closed, and his hands on his genitals, in deep stupor, out of which he can scarcely be roused; he mutters single, unintelligible words, draws faces according to the nature of his ever-working imagination, gesticulates, catches at something in the air, or picks the bed-clothes, tries to rise

or to put his feet out of bed; in fact, his mind seems to be constantly busy at something, although completely disconnected with the world around him. He manifests no desire for drink, which, however, when offered, is taken, though sometimes with great difficulty, as the tongue is parched and trembling and the swallowing difficult. The teeth and gums are covered with sordes, the nostrils appear blackened as by soot, and there exhales a terrible smell from out the mouth. By this time the petechial eruption is jointed by the breaking forth of a *miliary eruption;* the bronchial catarrh may increase to pneumonia or collapse of the lungs, and a number of cases, even light ones, are complicated with parotitis. The fever increases in all cases with the beginning of the second, may there have been a remission on the seventh day or not. In light cases, however, this aggravation is not very severe, nor does it last more than a few days, whilst in severe cases it reaches up to 42° C. and higher, and lasts to the end of the second week, even to the sixteenth and seventeenth day of the disease.

The third stage, or the *stadium criticum*, commences almost always in the latter part of the second week, or, in severe cases, in the first days of the third week. The change is remarkable often in one single night, in which the patient all at once, after so many sleepless nights, enjoys a deep, quiet sleep, out of which he awakes for the first time conscious again, but without remembrance of what has passed. The temperature has sunk perhaps two degrees, and the frequency of the pulse perhaps twenty to thirty beats per minute; instead of the pungent heat, the body is in a gentle perspiration and the roseola-spots appear much paler. Now reconvalescence commences, which goes on, however, quite slowly. Often recovery is delayed or even frustrated by a renewance of a slow fever, which takes away the last strength of the patient, or other sequelæ retard its progress, amongst which the most frequent are: inflammation and suppuration of the parotid glands, pneumonia, pleurisy, diphtheritic or follicular inflammation of the intestines, numerous furuncles, ecthyma pustules or large abscesses in the subcutaneous or intermuscular cellular tissue; even thrombi in the veins of the legs and their consequences.

Since the old school has come to senses, driven by homœopathic success, to leave off their *heroic* treatment, or, in plain English, since they have ceased torturing their patients out of the world, even they confess that this pestilential disease is not quite so fatal as it was thought to be. The greatest danger is a too-long continued extreme temperature of the body, 42° C., which, at last, must consume

any kind of constitution. According to Wunderlich, out of all the patients in whom the temperature did not rise above 40, 5°, none died. Severe complications may lead to a fatal issue.

There have been also observed light, *abortive* cases of exanthematic typhus, in which it even did not come to an eruption or to an enlargement of the spleen, and where the whole morbid process was finished in two weeks.

Therapeutic Hints.—See the following Chapter.

Typhus Abdominalis, Ileo-Typhus.

This form is recognized in this country under the name of TYPHOID FEVER, and is also called *enteric fever*, *enteromesenteric fever, and nervous fever.* Its *poison* is produced outside of the body under conditions of which the decomposition of animal matter seems to be the most important feature. It is likewise reproduced in the diseased organism, although this seems to be the exception, whilst the reproduction of its own poison in typhus exanthematicus is the rule. The influences which cause an epidemic spreading of the disease are unknown. In large cities sporadic cases happen at any season, though in preference during the latter part of wet summer seasons, during fall and the commencement of winter.

The *liability* for its infection is greatest in young and strong persons; infants and aged persons are seldom attacked. Tuberculosis, pregnancy and nursing do not entirely exempt; only the period of childbed grants entire immunity.

The principal *anatomical changes* which typhoid fever produces, are the following: *catarrh in the chest* even into the finest bronchial tubes; *enlargement of the spleen* to double and even six times its natural size; and *ulceration of the small intestines.* These latter more or less constant anatomical changes have given rise to its appellation of *ileotyphus.* Rokitansky distinguishes four stages of this typhoid process upon the mucous membrane of the small intestines.

1. The *congestive state,* by which the whole membrane appears swollen, injected and covered with slime, worse so, however, on its lower portion in the neighborhood of the valvula Bauhini.

2. The *state of infiltration,* by which the general redness and swelling gradually disappear and become concentrated to the solitary and Peyer's glands in the lower part of the ileum.

3. The *state of softening,* by which the swelling of the glands is

absorbed, or the glands burst and become covered with a dry crumbly crust, or they burst and discharge their contents without getting covered with a crust.

4. The *state of ulceration,* by which the affected glands suppurate and form the typhoid ulcer. These ulcers are round when originating out of a solitary follicle, and elliptic when originating out of Peyer's plaques; their size varies from that of hemp-seed or pea to the size of half a dollar. Their basis is the submucous cellular tissue which lines the muscularis of the gut.

The *symptoms* and *course* of typhoid fever are the following: The patient has generally several days previous to the attack a sense of general indisposition, weakness and debility, with headache, dizziness and soreness of the limbs, and sometimes repeated attacks of bleeding from the nose, or none of all. The attack itself begins almost always with a more or less violent chill, or repeated chilly sensations, but sometimes without a chill. It is therefore not always possible to fix accurately the time of the disease. The chill is followed by heat, which keeps a regular, quite characteristic typical rise and fall every day for the first week, in this manner, that the temperature of the body increases from morning till evening one degree, and again falls from evening to next morning one-half a degree. For example, if a patient's temperature rises on the first evening to 38, 5°, it will be next morning 38°; next night 39°, and the following morning 38, 5°, and so on, gradually climbing higher and higher. This is so pathognostic a sign of typhoid fever that *Wunderlich,* who has made the most accurate observations on this score, says: "In the first week it is so much the rule that the temperature rises one degree from morning till evening, and falls again from evening to the following morning one-half a degree, that we may exclude typhus from our diagnosis, if the temperature amounts already on the first or second day to 40°, or likewise, if it does not reach within the fourth and sixth day an evening aggravation of at least 39, 5°." When Wunderlich further adds, "that it would likewise exclude typhus if there were already an evening diminution of temperature towards the latter part of the first week," he may be perfectly right, if it be understood that the patient be let alone, or be treated allopathically. Homœopathic treatment shows other results; the well-selected homœopathic remedy may nip the fever in the bud within the first days of its existence.

With the temperature rises also the pulse, amounting generally during the first week from ninety to one hundred beats per minute;

sitting up, bodily exertion, or mental excitement, is apt to accelerate it considerably, even to twenty to thirty beats.

With all this the patient complains of great weakness and prostration, severe headache, dizziness, flickering before the eyes, and ringing in the ears; his sleep is restless and disturbed by tiresome dreams, sometimes of the same thing over and over again; he calls out in sleep or talks incoherently. When awake he is fully conscious but indifferent, answering questions slowly and reluctantly. His thirst is great, his appetite gone, and his taste pappy, disagreeable. The bowels are in the first days frequently constipated, but change towards the end of the first week to diarrhœa. There is in many cases repeated bleeding from the nose, and already at this time a catarrhal irritation in the chest. The face is flushed; especially the cheeks look dark red as long as the patient lies quietly on his back; but it turns pale and sunken when he sits up a while. The tongue is soft, flabby, showing the imprints of the teeth, and is covered by a slight whitish fur, which gradually is thrown off, leaving the tongue moist, smooth, and red, as though it were covered with a fine, gold-beater's skin; it soon, however, grows dry. In cases where the tongue is thickly coated, this covering commences to disappear either on the tip and edges, whereby the white-yellowish coating becomes encircled by a gradually broader growing, deep, red belt, or it disappears at first in the centre, and constitutes that well-known, dry, red streak in the middle of the tongue, which is frequently broader at the point of the tongue, and forms, in this way, a kind of triangle, with its base down at the tip.

The abdomen at this time appears somewhat bloated and is sensitive to strong pressure. A deep pressure upon the ileo-cæcal region may cause a gurgling noise in that region, especially if there be already diarrhœa present. The spleen is swollen, which can be detected by percussing the patient when he lies upon his right side. Finally, there appear toward the end of the first week single, pale, reddish, lentil-sized roseola-spots upon the epigastrium and adjacent parts of the chest and abdomen.

In the *second week* the temperature of the body ranges between 40, 5° and 41, 5°; towards morning there is only a slight remission, and the pulse grows softer, weaker, and more frequent, from one hundred and ten to one hundred and twenty beats. The dizziness increases, the ringing in the ears changes to hardness of hearing, which is generally dependent upon a catarrhal affection of the Eustachian tubes and tympanum. The expression of the face becomes

more and more stupid, and the indifference of mind increases. By-and-by the consciousness of the patient becomes clouded and he sinks gradually in a state of somnolence and stupor. Although the tongue is as dry as "chip," yet he utters no desire for drink; takes it, however, when offered, very greedily. When asked to show his tongue, he does not seem to comprehend at first, but finally, with great effort, he brings it forth, pointed and trembling. Stool and urine pass off involuntarily. The patient lies always on his back, and having lost consciousness of all muscular power, the body follows its own weight and the patient slides gradually down in bed, without any effort of his own to change this position. The mental operations are still going on; we see it on the now-and-then trembling lips, as efforts to speak, and in the low murmuring of unintelligible words now and then. This is *febris nervosa stupida.*

Other patients, although likewise mentally disconnected with the exterior world, neither knowing nor understanding what is going on about them, manifest a vivid, dreamful perturbation of the mind. They are in constant agitation, throw off the covers, try to get out of bed and to escape, talk loud or lisp some unintelligible words, gesticulate and become angry when interfered with. Their obstinacy in gaining their imaginary ends is sometimes astonishing, when all at once it changes to some other object. In other cases there seems to be no intelligible connection between the constantly-changing phantasmata, with which they seem to be haunted. This agitation of the mind is generally greatest during the night. This is *febris nervosa versatilis.* There are again cases where both of these states make a regular turn; the febris stupida prevailing through the day, and the febris versatilis through the night.

During this week the bowels are almost always loose, owing to the catarrhal affections of the intestines; the cheeks have a brownish-red or bluish color; the eyelids are half closed; the conjunctiva is injected; the nose is thoroughly dry, and the nostrils are blackened as of soot. On the gums and teeth we observe sordes; the tongue is covered with a brownish crust, which gradually grows black from the admixture of blood; it is stiff, making swallowing quite difficult. The abdomen is inflated like a drum; the spleen has grown still larger, and the roseola-spots have, in some cases, likewise increased, and are joined by numerous *sudamina.* On the chest, physical examination reveals solidification of the dependent parts of the lungs, and far-spread catarrhal affections. There is a less full percussion sound, weak vesicular

breathing, fine, bubbling rattles in the dependent parts, and loud rhonchi everywhere else.

The *third week* does not bring any amelioration as yet. The temperature of the body is still on the increase, and the morning remissions are quite indistinct. Only where the case turns favorably, there is in the second half of the third week a decided improvement in this respect. Whilst the evening temperature still rises to 40—41°, the morning temperature shows only 38 or 39°.

The prostration reaches, in this week, its climax; the patient slides down in bed; there is a constant jerking of the tendons; somnolence and stupor are complete, and stools and urine are passed unconsciously, or the urine is retained in consequence of a paralysis of the detrusor vesicæ; the roseola-spots commence to get paler, whilst the sudamina increases more and more, and in some cases there appear petechiæ To all this associates an erythema in the region of the sacrum, which by throwing off the epidermis, is soon converted into a bed-sore—*decubitus*. This is, indeed, the week when the mortality of typhus patients is the greatest, whilst in favorable cases its latter part is the turning point. We observe then a gradual abatement of all the above detailed symptoms. The stupor changes into a natural sleep, consciousness gradually returns; diarrhœa, respiration, pulse, countenance, all improve.

This improvement continues in the *fourth week*, or in some instances commences then, and finally passes over into the state of reconvalescence. During this time nearly all the patients lose their hair, which, however, is soon followed by a new crop.

This is about the course which a majority of typhoid fever cases run. Besides this, however, there are a number of variations, of which the following are the most important.

The *abortive typhoid fever* is, in every respect, much lighter, and corresponds to the "*gastric fever* or *nervous fever*" of older writers. Although it shows all the symptoms of a regular typhoid fever, yet they are all much milder; the temperature of the body never reaches such an intensity, and already on the eighth or ninth day there is a considerable morning remission, which sinks at the end of the second or during the third week to a normal state, with only slight aggravations in the evening. Still the patients gain quite slowly their usual strength.

The *typhus ambulatorius* is a peculiar form, corresponding to the "walking cases" of yellow fever, by which the patient complains only of general debility and exhaustion, but still attends to his business, until all of a sudden he sinks under the signs of perforation of the

intestines or intestinal hemorrhage. In such cases it seems that the poison has localized exclusively in the intestines, without affecting the general circulation.

The *typhus tumultuarius*, on the other hand, sets in at once so violently, that the temperature of the body rises already in the first week to 41° and above, and the pulse to 120 and 130; all other symptoms are correspondingly severe, so that the disease reaches its climax towards the end of the first or in the beginning of the second week. Such cases are mostly fatal at this early period, or the symptoms grow milder again in the second week, and take then the usual course.

The *pneumo-typhus* and *broncho-typhus* are forms in which the poison seems to localize principally in the chest, causing hypostasis of the lungs, pneumonia, or violent bronchitis, whilst the characteristic affections of the small intestines are comparatively light, or even wanting.

In still other cases the normal progress of the disease is interrupted by an intercurring *perforation of the intestines*, when the typhoid ulcers eat through the muscularis and serosa of the gut. This is always followed either by a partial or diffuse peritonitis, the symptoms of which compare under the corresponding chapter. The most reliable sign, however, of perforation, during typhus, is *tympanites* or the sudden escape of gas into the peritoneal sac, which presses the liver back from off the thoracic wall, and causes, on percussion, in place of the dull, liver-sound, a clear tympanitic sound.

Or the natural progress of the disease is interrupted by an intercurring *hemorrhage from the bowels*. This takes place either in consequence of arrosions of blood-vessels near the ulcers, or in consequence of the bursting of overfilled capillaries. It causes bloody stools, and if profuse, collapse and a sudden sinking of the temperature, which sometimes restores consciousness for a while, but generally ends fatally in consequence of the exhaustion which it produces. Less dangerous are the intercurring *profuse hemorrhages from the nose*, which take place sometimes in the second or third week of typhus, and the *hemorrhages from the womb* in female patients. But as both are the consequence of a highly-debilitated state of the system, none of them can be considered as a favorable sign.

Or the whole course of the disease is protracted by the *slow healing process of the intestinal ulcers*. In such cases we find the typhus followed by a low, asthenic fever for weeks afterwards, or in fact there is no cessation of the fever; the sensorium remains clouded; the

weakness increases; the emaciation grows excessive; the *bed-sores* enlarge; any part of the body wherever its own weight rests upon, shows the signs of decubitus. Many of these patients die about the fifth or sixth week, as such a far-spread decubitus alone seems to be sufficient to consume the little strength that is left.

As *sequelæ* of typhus may be mentioned: neuralgia, partial paralysis, partial anæsthesia, mental disturbances, tabes, anæmia and hydræmia. It is not unfrequent that, during the period of reconvalescence, phthisis pulmonalis is developed.

Therapeutic Hints.

Apis, according to Wolf, in the presence of: apathic conditions, unconsciousness, stupor, with murmuring delirium, hardness of hearing, inability to talk and to put out the tongue, which is cracked, sore, ulcerated, or covered with vesicles; difficulty in swallowing, great soreness and bloatedness of the abdomen; constipation, or frequent, painful, foul, bloody, and involuntary discharges from the bowels; unconscious flow of urine; dry burning skin, or partial, clammy sweats; trembling and jerking of the limbs; white miliary eruption on the chest and abdomen, greatest weakness and sliding down in bed; frequently changing, weak and intermitting pulse.

Arnica, stupefied condition; sits as if in thought, yet thinks of nothing, like a waking dream; forgets the word while speaking; confusion of the head; loss of consciousness; delirium; great weakness, weariness and bruised soreness, which compels to lie down, and yet every position feels too hard; unrefreshing sleep, with anxious dreams, talking, and loud blowing in, and expirations; bleeding from the nose; trembling of the lower lip; dry tongue, with a brown streak in the middle; putrid smell from the mouth; distention of the abdomen; involuntary discharge of feces and urine; pleuritic stitches at every inspiration; great sinking of strength.

Arsen., especially for weak or debilitated individuals, old age and children; in slow, protracted cases, with mild delirium; loss of consciousness; great restlessness and anxiety, manifesting itself in constantly moving head and limbs, whilst the trunk lies still, on account of too great weakness; picking of the bed-clothes; sopor; face distorted, sunken, anxious, hippocratic; cheeks burning hot, with circumscribed redness; eyes staring, glistening or sunken, dull and watery, or closed with sticky matter; hardness of hearing; lips dry and cracked; lips, gums and teeth covered with brown or black slime; tongue red and dry, cracked; stiff, like a piece of wood; black tongue;

speech unintelligible, lisping, stammering, as though the tongue were too heavy; excessive thirst, but little drinking at a time; the fluid rolls audibly down into the stomach; vomiting and retching; burning in stomach and bowels, sensitive to pressure; meteoristic distention of the abdomen; constipation or looseness of the bowels; brownish or watery, bloody, foul, involuntary discharges; involuntary discharge of urine or retention of urine. Voice weak and trembling, or hoarse, coarse or crowing; breathing short and anxious, oppressed, rattling; dry cough; fetid breath. On chest and abdomen roseola-spots; white miliary eruption, even petechiæ; decubitus; excessive prostration and rapid emaciation; pungent, hot, dry skin, like parchment; cold, clammy perspiration; pulse frequent, small, trembling. A cadaverous smell scents the whole atmosphere. All symptoms worse about and soon after midnight.

Baptisia, "she cannot go to sleep, because she cannot get herself together. Her head feels as though scattered about, and she tosses about the bed to get the pieces together." (Dr. Bell, of Augusta, Maine.) Dull, stupefying headache, confusion of ideas; delirious stupor; dark, red face, with a besotted expression; injected eyes; coated tongue, brown and dry, particularly in the centre, or dry and red; sordes on the teeth; fetid breath; fetid sweat; fetid discharges from the bowels; fetid urine; great debility and nervous prostration; ulcerations; chilliness all day; heat at night; chilliness, with soreness of the whole body.

Bellad., during the early stage, especially of tumultuous cases, when there is great congestion to the brain, with great drowsiness, and an inability to go to sleep, and frequent starting during sleep; violent delirium, with attempts to run away, to strike, bite, or spit on his attendants; sparkling, staring eyes; throbbing of the carotid and temporal arteries, and also in the forehead; deafness; burning heat and redness of the face; distortions of the mouth; dryness of nose, mouth, and throat; tongue with red margin and white centre; trembling and heaviness of the tongue, with stammering as if drunk; sore throat and dry cough from bronchial irritation.

Bryon., in any stage when there is delirium, especially at night about the affairs of the previous day or business matters; visions, especially when shutting the eyes; irritableness; peevishness; easily offended; hasty speech; headache; dull, pressive, or stitching, tearing pains, worse from motion and opening the eyes; eyes dull, watery; hardness of hearing; dryness of nose; lips dry, brown, cracked; tongue coated thick, white, or yellowish; later, brown and

dry; dry feeling in the mouth, without any thirst or else great thirst, with drinking large quantities at a time; bitter taste in the mouth; nausea; retching; great soreness in the pit of the stomach to touch or motion; bowels constipated; hard cough, with stitching pain in the chest and region of the liver; bronchitis; great lassitude and weakness; wants to lie quiet; pain in all the limbs when moving; restless sleep, with groaning and moaning, and frequent movements of the mouth, like chewing; eruption of white, miliary rash, with anxiety in the region of the heart; sighing, groaning, and moaning, and a peculiar, sour smell of the body, with or without sweat.

Calc. c., according to Goullon, during the aggravations, which precede the outbreak of the miliary rash, about the fourteenth day of the disease: palpitation of the heart, tremulous pulse, anxiety, restlessness, redness of the face, delirium, jerkings, especially in children; short, hacking cough; excessive diarrhœa. Besides this, it may be indicated at the very onset, and then cut off all further progress in persons inclined to grow fat; after great anxiety and worriment of mind; utter sleeplessness from over-activity of the mind; *it is the same disagreeable idea which always rouses the patient as often as he falls into a light slumber;* constant tickling under the middle of the sternum, causing a hacking cough, worse from talking or moving; during coughing, painful shocks in the head; the brain feels hot and burning. Lippe.

Carbo veg., often at the brink of death a saviour, in those states of collapse, dissolution of blood, and paralytic conditions, which seem rapidly to invade the whole organism. All this is indicated by stupor, out of which the patient can scarcely be roused for moments; the eyes are dull, without lustre, and the pupils without reaction against light; the hearing is gone; the face is pale, sunken, hippocratic, cold; there are hemorrhages from mouth and nose; the tongue is sometimes moist and sticky; other times parched and cracked, heavy, scarcely movable; bluish or pale; the pit of the stomach is bloated; the abdomen meteoristic, with loud rumbling and gurgling of wind in the intestines; there is colliquative diarrhœa, brownish, grayish, or bloody, of a cadaverous smell, and involuntary. The cough has ceased, and the collecting secretions cause loud, rattling breathing, a sign of beginning paralysis of the lungs; the circulation is without energy; the blood stagnates in the capillaries, and causes cyanotic blueness of face, lips, and tongue; ecchymotic spots here and there; decubitus; the pulse is extremely weak, frequent, small, scarcely perceptible; face and extremities grow cold

and become covered with cold perspiration—all signs of beginning paralysis of the heart; in short, the patient offers a picture of complete torpor of all vital functions, thus differing entirely from that of Arsenicum, which is always more or less associated with erethism of the system.

China, especially where there is painless diarrhœa, bloatedness of the abdomen, hemorrhages, and slowly-progressing reconvalescence after such weakening influences.

Coccul., in such cases which are mainly characterized by a deprimation of the nervous system, showing little or no disturbance in the vegetative sphere of the system, except enlargement of the spleen. There is a slowness of comprehension; he don't find the right expressions for his ideas; what has passed he cannot remember; he talks muttering, mumbling; it costs him great effort to speak the words plainly; and then again for a short while he is very irritable, cannot endure either noise or contradiction, and speaks hastily. Most of the time, however, he sits in silence or feels an unconquerable inclination to sleep; his eyelids are heavy, fall shut, as if paralyzed; the drowsiness may increase to coma. There is dizziness in the head, especially when rising up in bed, with nausea, compelling to lie down again; ringing in the ears; heat in the head and chilliness in the remaining body; pappy taste in the mouth; belching; nausea; distention and rumbling in the abdomen; great general weakness and weariness; great heaviness in the feet; attacks of trembling and jerking of the eyelids, muscles of the face, and limbs, and fits of fainting from bodily movement, with spasmodic distortion of the facial muscles.

Colchicum, according to Wells, great weakness, as if after exertion. If the patient be raised up the head falls constantly backwards, and the mouth opens to the widest extent. Sudden sinking of the forces, so that in ten hours he can hardly speak or walk; cadaverous aspect and extreme prostration; emaciation; lying on the back; comatose; eyes half open; respiration audible and accelerated; hands and feet cold; trunk hot and extremities cold; skin dry; sweating; suppressed, cutaneous transpiration; forehead covered with cold sweat; pulse small and contracted, quick, and hardly perceptible, small and frequent, quick, and thready; pulseless; delirium, with cephalalgia; intellect beclouded, though he gives correct answers to questions; unless questioned, he says nothing of his condition, which does not seem to him dangerous; perceptions entirely lost; he is unconscious; eyes hollow, staring, and sunken; pupils much dilated and little

sensitive to light, immovable, and but slightly dilated; nostrils dry and black; face sunken and hippocratic; risus sardonicus; lips, teeth, and tongue covered with a thick, brown coating; lips cracked; face covered with perspiration; grinding of teeth; tongue protruded with difficulty; tongue bright red; tongue heavy, stiff, and numb; loss of speech; inextinguishable thirst; epigastrium and stomach extremely sensitive to pressure; abdomen distended, tense, and hard; surface of the abdomen hotter than the rest of the body; tympanites with pain in the back; watery diarrhœa; the stools are passed insensibly; stools fluid, offensive, with white flakes; involuntary stools; numerous, liquid, dark, offensive stools, with severe pain; secretion of urine suppressed; urine copious; involuntary urination; respiration irregular and intermittent.

Cuprum, according to Baehr, in typhus without high fever, but with excessive weakness, which increases under the signs of dissolution of blood (nose-bleed and petechiæ) rapidly, until under general paralytic symptoms death ensues.

Fluor. ac., recommended by Hering when there is decubitus.

Ginseng, loud gurgling noise in the ileo-cæcal tract, dry tongue, heat, delirium on going to sleep. Liedbeck.

Hydrocyan. ac., when the drink which is swallowed rolls audibly down the throat, as though it were poured into an empty barrel. Heynel.

Hyosc., entire loss of consciousness, and of the functions of the organs of the senses; does not recognize relatives or friends; illusions of the imagination and senses. Delirium which is continued while awake, and which sees persons who are not and have not been present. Indistinct and muttering loquacity; muttering with picking of the bed-clothes; inability to think, the thoughts cannot be directed or controlled; constant staring at surrounding objects, with apparent entire self-forgetfulness; or else great agitation; restlessness; jumping out of bed; attempts to run away, &c. Eyes red and sparkling, staring, rolling about in their orbits; squinting; deafness; distorted face, stupid expression; tongue red or brown, dry and cracked; paralyzed; loss of speech, or indistinct speech; cadaverous smell from the mouth; involuntary or unnoticed stools in bed; suppressed secretion or retention of urine; involuntary discharge of urine. Paralysis of sphincter ani and vesicæ. Convulsive motions; grating of teeth; jerkings; subsultus tendinum; trembling; sleeplessness, or constant sleep with muttering; coma vigil. Roseola spots on chest and abdomen.

Ignat., great impatience and despair about pains and bad feelings, which he cannot describe; gets easily frightened, and feels as though he were swung to and-fro in a cradle or in a swing. Attacks of yawning, stretching, followed by pain in the front of the head, which does not allow opening the eyes; choking sensation from the stomach up into the throat, with oppression in the chest, better from belching; palpitation of the heart; sinking, weak feeling in the pit of the stomach; convulsive motions of the limbs; jerking of the tendons. Sleeplessness on account of various visions as soon as he falls in a doze; troublesome dreams.

Lachesis, fever worse in the afternoon; sweat without alleviation; sleep with following aggravation of all the symptoms; loss of consciousness; muttering; stupor; sunken countenance; dropping of lower jaw; dry, red or black tongue, cracked on the tip and bleeding; in the attempt of protruding it, it trembles; or the tip remains under the lower teeth, and does not come out; dry lips, cracked and bleeding; stools very offensive, whether formed or loose; sore throat, with deafness; nasal, indistinct speech; dyspnœa; cough, with slimy, bloody expectoration.

Lyc., sopor; delirium; uses wrong words for correct ideas, which he intends to express; fear to be left alone; restless sleep, with outcries and loud laughing; when awaking, exceedingly cross, irritable, scolding, screaming, behaving disagreeably; violent jerkings of the limbs, shaking the whole body, awake or asleep; subsultus tendinum; catching at flocks; sunken face, yellowish, or with circumscribed redness in the afternoon; tongue red and dry; sometimes it is spasmodically thrust to-and-fro between the teeth; lower jaw sunken; bowels much distended, with rumbling and constipation; urine leaves, if voided in bed, a red, sandy stain; cold hands and cold feet; one foot hot and the other cold.

Merc. may be indicated at the beginning of the disease, when there is: swollen and bleeding gums; fetor from the mouth; pain in the liver; green-yellow stools; dark urine; bronchitis; icteroid color of the skin.

Moschus, in cases of impending paralysis of the lungs, where the cough ceases and the collected mucus cannot be expectorated; where respiration and pulsation of the heart grow weaker and weaker; where in swallowing, the fluid rolls audibly down the throat, and stool and urine pass off involuntarily.

Mur. ac., febris stupida; constant sliding down in bed, with groaning and moaning in sleep, and muttering and unconsciousness whilst

awake; excessive dryness of mouth and tongue; the tongue is heavy, paralyzed; the patient cannot move it at will, even if conscious; the pulse intermits every third beat; profuse discharge of watery urine; watery diarrhœa; stools and urine involuntary.

Nitr. ac., in case of typhoid hemorrhages; great sensitiveness of the abdomen; green, slimy, acrid diarrhœa; tenesmus; white, coated tongue, with sore spots; inflammatory affection of the lungs with rattling cough and breathing; brownish, bloody expectoration and irregular pulse; after calomel.

Nux v., "in the early stage, if there be chilliness on slightest movement; dryness of the front of the mouth and tip of the tongue; intolerance of impressions on the external senses, all of which seem much exaggerated; great sensitiveness to the open air; thirst, with aversion to water; strong want to lie down, and considerable relief on doing so." Wells.

Opium, febris nervosa stupida; the stupor is complete; he cannot be roused or only with great difficulty; lies speechless, with open eyes and stiff limbs; delirium, mild or furibund, with loud talking, laughing or singing; attempts to escape; congestion to the head; face dark-red and bloated; respiration slow, deep-drawn and sighing, stertorous, rattling; constipation or offensive watery diarrhœa; involuntary stools; retention of urine.

Phos., pneumo-typhus; violent bronchitis and even hepatization; hard, dry cough with tightness in the chest; or loose, rattling cough, with tough, transparent, or thick, yellowish, or reddish expectoration; cough worse from evening until midnight; vomiting of watery, bilious, and slimy masses with great pain; frequent, unpainful diarrhœa with meteorism and loud rumbling; the discharges are watery, greenish, grayish, or black from decomposed blood; great weakness after each discharge; numerous roseola-spots, ecchymosis, and miliary eruption on the trunk; great heat of the trunk with cold perspiration on head and extremities.

Phos. ac., complete apathy and indifference; don't want to talk; answers slowly and reluctantly, or short, incorrect; stupor; stupid expression of the face; bleeding from the nose; meteoristic distention of the abdomen, with a great deal of rumbling and gurgling, and unpainful, watery, grayish diarrhœa; also involuntary stools; great debility; relaxed, pale skin; ecchymosis; bluish-red spots on the parts where the patient lies upon; decubitus; temperature of the body not high; constant, sticky, or profuse sweat; pulse weak, and small, frequent, and intermitting.

Pulsat., at the early stage where external heat is intolerable, causing a sense of heat with distress; uncovering, however, is followed immediately by a chill; or there is heat only of one side, or heat of one side with coldness of the other; or sweat of one side; there may be great drowsiness; delirium; frightful visions; dry tongue, as if burnt, and yet no thirst; rumbling in the bowels and diarrhœa, with pinching pain, worse at night; pulsating in the epigastrium.

Rhus t., mental operations are slow and difficult; he answers correctly but slow, sometimes hasty; delirium; talks much to himself, or talks incoherently, without any seeming connection of ideas; headache; worse from opening and moving the eyes; bleeding from the nose, especially after midnight; the lips are dry and covered with brown crusts; the tongue is red at the tip, in the shape of a triangle; the bowels are loose, worse at night; involuntary alvine discharges during sleep. There is often severe cough, with tough, bloody expectorations; bronchitis; pneumonic infiltration at the lower lobes of the lungs; severe rheumatic pains in the limbs, worse in rest; somewhat ameliorated by moving and changing position; constant restlessness; tossing about; restless sleep, with frightful dreams, and frequent waking, and never that state of quiet, profound coma; dry heat or sweat, during which the patient desires to be covered; roseola-spots; miliary eruption; great exhaustion.

Silic., sometimes in the very worst cases, with excessive debility, profuse perspiration, and a strong desire to be magnetized; magnetizing relieves the great weakness, and Silicea promotes the forming of abscesses, boils, &c., thus throwing the poison to the surface, and securing a gradual though slow recovery.

Stram., loss of consciousness; imbecility; stupefaction of the senses; delirium; singing; laughing; whistling; constant, involuntary, odd motions of the limbs and body; spasmodic distentions of the face; loss of sight, hearing, and speech; all objects appear oblique to him; red rash upon the chest; blackish diarrhœa every hour; stools smell like carrion; suppressed secretion of urine; retention of urine; copious, involuntary discharge of urine.

Sulphur, when in psoric individuals the well-selected remedy has no or only a superficial effect; besides, if there be sleepless nights; slow comprehension when being asked; heat and fulness in the head; chronic, sore, and inflamed eyelids; great dryness of the ears; pale, sickly aspect; bright, red lips; undefined redness of the tip of the tongue; bleeding from the nose, teeth and gums; offensive smell from the mouth; diarrhœa, worse early in the morning; unpainful

or with tenesmus; great prostration after stool; offensive urine; catarrh and inflammation of the lungs, especially during the commencement of infiltration, recognizable by the crepitation sound.

Taraxacum, during rest intolerable, tearing pains only in the lower extremities, (Rhus t. has such pains in all the limbs;) constant muttering to himself, similar to that of Hyoscyamus; violent, tearing pain in the occiput; great chilliness after taking any thing to eat or drink. (*v. Boenninghausen.*) Map-tongue.

Tart. em., in pneumo-typhus, with great rattling in the chest, dyspnœa, &c.; symptoms of œdema pulmonis.

Veratr., during cholera-epidemics; great prostration; cold sweating; coma; vomiting and watery diarrhœa; bluish face; pointed nose; wrinkled skin.

Zincum, staring eyes; delirium with attempts to get out of bed; complete unconsciousness; lying on the back and sliding down in bed; grasping at flocks; subsultus tendinum; constant *trembling of the hands* and *coldness of the extremities;* relaxation of the muscles of the face; hippocratic face; pale, waxy complexion of the face; decubitus on the sacrum and trochanter; frequent, involuntary discharges from the bowels; frequent, small, intermitting, scarcely perceptible pulse; impending paralysis of the brain.

General Hints.

In predominant *cerebral* symptoms, compare: Apis, Bell., Bryon., Cupr., Hyosc., Lach., Opium, Stram., Zinc.

In predominant *abdominal* affections: Apis, Arsen., Bryon., Carbo veg., China, Colch., Ginseng, Merc., Nux v., Phos. ac., Rhus t., Secale, Sulphur, Ver.

In *pneumo-typhus:* Apis, Bell., Bryon., Merc., Phos., Puls., Rhus t., Sulphur, Tart. em.

In *febris nervosa stupida:* Arn., Ars., Carbo veg., Cocc., Hyosc., Lach., Mur. ac., Phos. ac., Rhus t., Secale.

During reconvalescence, when there is too great hunger: Puls.

Diarrhœa, with cutting in the bowels after sour things: Ipec.

Over-exertion of the body: Rhus t.

Fright: Ign.

Chagrin: Nux v.

Loss of memory: Anac.

Complaints, which go from above downwards: Selen.

When commencing below and spreading upwards: Guaco.

Protracted reconvalescence: Psorinum.

EXANTHEMATA.

Measles, Morbilli.

Measles are contagious, and more so during the stadium prodromorum et eruptionis than at a later period. The nature of that poison is entirely unknown. Only this much is certain, that it regenerates itself in the infected person, that it impregnates the surrounding atmosphere, and that it may be carried from there to other quarters. Measles prevail therefore mostly as epidemics, in preference, it seems, during those months which favor catarrhal affections. As a general rule, they attack a person only once in life, and more children than grown persons, although there are many exceptions. The time of incubation varies from eleven to fourteen days.

The eruption of measles consists in numerous, roundish, lentil-sized red spots, which are a little raised above the level of the surrounding skin, and contain generally in their centre a little papula. The closer they appear the more do they coalesce, and in this way they form irregular, half-moon-shaped plaques, whilst on places where they are scarce, they stand isolated. Between these spots the skin appears of a normal color; on the face, however, it is usually somewhat œdematously swollen. Even in cases where they appear so abundantly as to coalesce, (*morbilli confluentes,*) they do not present an evenly diffused redness, but always a spotted appearance. There are cases in which the hyperæmia of the skin results into an extravasation of blood, causing the eruption to assume a dark, blood-red appearance, and petechial spots to appear between the eruption; this form is called *morbilli petechiales* or *rubeolæ nigræ.* The measly redness disappears under the pressure of the finger, and reappears again after removing the finger, from the *middle towards the periphery*, contrary to scarlet-fever redness, which reappears from the periphery to the centre. Measles are always more or less accompanied by catarrhal affections of the eyes, nose, larynx and bronchial tubes, even by pneumonic symptoms. The blood is, like in other infectious diseases, destitute of fibrin, and of a dark color.

The course and progress of measles is the following:

The first stage, or the *stadium prodromorum,* consists in a seemingly simple cold in the head and chest. There is chilliness and

feverishness; headache; sensitiveness to light; watery eyes; watery discharge from the nose; sneezing; nose-bleed; hoarseness and cough, which latter assumes sometimes a croupy nature. Only in exceptional cases these symptoms amount to any considerable severity, and may then be associated with vomiting, delirium and sopor; in the majority of cases, however, the little patients do not mind them, but run about. On inspection of the fauces we observe that about the third day of this premonitory stage the identical eruption of measles has made already its appearance in the form of single, lentil-sized red spots upon the roof of the mouth and fauces, some twenty-four or twelve hours before there is any sign of an eruption on the external skin. This accounts at once for all the catarrhal symptoms, and for the fact that measles are already transmitted at this early stage from child to child by the mere breath.

The second stage, the *stadium eruptionis*, is marked by an exacerbation of the fever; the temperature of the body rises and ranges during the height of the disease between 39, 4° and 40, 4°, and may, in severe cases, reach even 41°. During this time it happens occasionally that convulsions set in. The eruption appears first in the face and spreads gradually downwards over the whole body. There is now a peculiar measle-smell, scenting the whole atmosphere of the patient. In anomalous cases the eruption appears at first on the arms; in others it stays confined to single portions of the body, and in still others there is no eruption at all, (*morbilli sine exanthemate,*) although all the other symptoms and the previous exposure to the infection leaves no doubt as to the nature of the disease. The stadium eruptionis generally is completed in twenty-four to thirty-six hours, although in some cases it lasts three, even four days, in which cases the first spots already disappear when the last come out.

During this stage the catarrhal affection generally reaches its height, and in malignant epidemics it occurs that already at this early stage death ensues in consequence of general paralysis and adynamia. In such cases the pulse grows weaker and weaker; the cutaneous capillaries burst and cause hemorrhages within the cutis; the prostration of strength is excessive, and the patient sinks into a typhoid condition.

The third stage, the *stadium florescentiæ,* is blended with the eruptive stage. In usual cases, already twenty-four hours after its full development, the redness commences to grow paler, and with it all the other symptoms, heat and catarrh, gradually grow milder. Such normal cases are termed *morbilli vulgares, simplices* or *erethici.*

In other cases the measle-spots grow darker, assume a purple color,

and remain visible upon the skin for five or six days. The dark coloring of the eruption is owing to the rupture of the cutaneous capillaries, and for this reason the redness does not disappear under the pressure of the finger. The whole morbid process is of a much severer nature, and approaches that of other inflammatory processes. The heat rises above 40°; there is throbbing of the carotid arteries, palpitation of the heart, and a full, strong pulse; the catarrhal cough not unfrequently changes into a croupy cough, and there may even exist a complication with lobular pneumonia; or the catarrhal affection extends upon the alimentary canal and causes vomiting and diarrhœa. This state of things may augment to complete prostration and collapse; then the eruption disappears from the skin, and such a condition is not without danger. This form of measles has been termed *morbilli inflammatorii*, or *synochales*.

A still other form is that which has already been alluded to in the second stage. It is characterized by general adynamia and torpor. The eruption remains visible only a short time, is either pale-reddish or purple, and frequently interspersed by petechiæ. It is often combined with profuse bleeding from the nose; the pulse is very frequent and scarcely perceptible; and the patient sinks into sopor and collapse. This form is called *morbilli asthenici*, *nervosi*, *torpidi*, or *septici*.

The fourth stage, the *stadium desquamationis*, commences in simple cases usually about the eighth or ninth day of the disease. The measle-spots have at this time entirely disappeared, and in their places we observe a gradual loosening of the epidermis, which is thrown off in the form of fine scales. This process can best be observed on the face and hands, whilst on the parts covered, the loosened skin is rubbed off before it is noticed. This stage is rarely interrupted by dangerous complications; still it may become complicated by croupous laryngitis or pneumonia. Noma or mortification of the labia pudenda is of very rare occurrence.

As *sequelæ* of measles are mentioned as quite prominent, chronic, catarrhal cough, and chronic pneumonia, which may end in consumption. Besides these, a number of scrofulous affections, such as chronic inflammations of the eyes; otorrhœa; glandular swellings; and chronic inflammations of the periosteum and of the joints. It is but just to remark that under homœopathic treatment sequelæ are of very rare occurrence.

Therapeutic Hints.—The bed-room ought not to be kept too warm, but of an equal temperature of about 65 or 66° F. It ought

to be aired frequently with care. The light in the room ought to be modified according to the patient's own desire. If he wants to drink, let him have cold water; he may eat fruit provided his bowels are not disordered. After fever and catarrhal irritation have passed away, give him a warm bath, and on the following day a cool wash all over, taking care that it be done quickly, and that the patient be well rubbed and dried by flannel afterwards. After that time he may be allowed to go into the fresh air, provided the weather allows it.

Acon. is the very remedy at the beginning, because it corresponds to all the symptoms of usual cases—full, quick pulse, dry, hot, burning skin; fever; restlessness; catarrhal irritation from the eyes down into the bronchial tubes; nose-bleed; dry, hacking, or even croupy cough; stitch pains in the chest; restless sleep, with jerking and starting; grating of the teeth, moaning and groaning, or sleeplessness with great agitation and anxiety; pain in the stomach and bowels, with vomiting and diarrhœa.

Ant. cr., pain in the ears; white, coated tongue; gastric derangements.

Apis, confluent eruption and œdematous swelling of the skin; greatly inflamed eyes; croupy cough; violent cough, similar to hooping-cough; catarrh of the bowels, with diarrhœa; prostration, muttering and delirium.

Arsen., in adynamic cases. Persistent burning heat of the skin; frequent, quick and small pulse; great anxiety; restlessness; palpitation of the heart; too early or sudden disappearance of the rash; pale, earthy color of the face; bloatedness of the face; thrush in the mouth and fauces; constant craving for cold water, with but little drinking at a time; vomiting and diarrhœa; great sinking of strength; all worse about midnight.

Bell. may be indicated as often as Acon. in the commencement, if there be heat with moisture of the skin, quick, but soft pulse; constant drowsy sleep, or drowsiness with inability to go to sleep; congestion to the head; injected eyes; thick, white-coated tongue; sore throat, even diphtheritic; hollow, barking, croupy cough; jerkings of the limbs; convulsions.

Bryonia, by slowly-forthcoming eruptions and inflammatory affections of the chest; dry, painful cough, constipation, &c.

Camphora, in those dangerous cases where the face grows pale and the skin cold, assuming a bluish, purple color, with utter prostration and spasmodic stiffness of the body. Also in different after-complaints, especially painful and difficult micturition.

Carbo veg., persistent hoarseness after measles.

Cham., painful, watery diarrhœa, in consequence of taking cold.

Coffea, nervous, restless agitation, preventing all sleep; short, dry, hacking cough.

Drosera, cough, with drawing together of the epigastrium, similar to hooping-cough.

Euphrasia, streaming of hot, burning tears from the eyes, with great photophobia; profuse running from the nose, without burning; cough only during the day.

Hepar, croupy cough, with rattling in the chest, but without expectoration; worse in the morning.

Ipec., tardily forthcoming eruption, with oppression of the chest; tickling cough and vomiting.

Kali bichr., flowing of water from the eyes, with burning when opening them; pustules on the cornea; stitches in the left ear extending into neck and head, with swelling of the glands; watery discharges from the nose with great sensitiveness and ulceration of the nostrils; thirst, with dryness of mouth and tongue; watery diarrhœa, followed by tenesmus; loud, rattling cough, with stringy expectoration.

Merc., diarrhœa, with pain in the bowels and tenesmus.

Nux v., after previous use of drugs; nose stopped up; cough dry in the evening and loose in the morning.

Phos., in complication with bronchitis and pneumonic symptoms; tightness across the chest, with a dry, tight cough; worse from evening until midnight; ~~un~~painful diarrhœa.

Puls., inflammation of the eyes and photophobia; thick, yellow discharge from the nose; dryness of the mouth, without thirst; nightly diarrhœa, after previous rumbling in the bowels; rattling, loose cough, with expectoration of thick, yellow mucus; increase of all the symptoms towards evening; chronic, loose cough after measles.

Stram., sometimes before the outbreak of the eruption, if there be frightful visions of rats, mice, &c., at which the patient is startled and from which he tries to hide; spasmodic affection of the œsophagus, hindering swallowing.

Sulphur, either during the first stage, when the eruption makes a tardy progress, or for after-complaints, such as chronic coughs, originating in remnants of partial pneumonia; chronic diarrhœa; hardness of hearing; chronic discharge from the ears.

Veratr., pale, livid color, and tardy appearance of the eruption; hemorrhages without amelioration; burning heat, with alternate cold extremities; very frequent, weak, intermitting pulse; delirium; restlessness; drowsiness; apathy.

Scarlatina, *Scarlet Fever.*

It is characterized by the following three features:

1. *Erythematous inflammation of the skin*, which consists of a high state of hyperæmia and an inflammatory œdema of the superficial layers of the skin, in consequence of which the skin reddens and swells. In many cases we observe a uniform redness all over—*scarlatina lævigata;* in others the redness appears in more irregular patches, or is darker in some places than in others—*scarlatina variegata;* in still others, though more rarely, the inflammatory exudation raises the skin to numerous little vesicles—*scarlatina miliaris seu vesicularis;* again, in others there appear large blisters filled with watery or yellowish turbid fluid—*scarlatina pemphigoidea s. pustulosa;* in still others the inflamed cutis is elevated into small papulæ—*scarlatina papulosa;* and in very bad cases we sometimes observe here and there ecchymosed spots as the effect of capillary hemorrhages within the skin.

2. *Inflammation of the mucous membranes of the fauces.* This is either a mere *catarrhal inflammation,* swelling, and reddening the fauces, tonsils, the velum palati, and uvula, which, at first dry, are soon covered by an abundant secretion of mucus; or in malignant epidemics it is of a *diphtheritic nature;* then we observe grayish deposits appearing upon the tonsils and fauces, which gradually become discolored, loosen, and leave the surface of the mucous membrane underneath irregularly broken and covered with ichor, which emits a terrible smell. This same process extends up into the nasal cavity and constitutes the virulent coryza of malignant scarlatina. At the same time we observe a considerable swelling of the parotid and lymphatic glands and of the subcutaneous cellular tissue of the neck.

3. *Inflammation of the kidneys,* which consists of either a *catarrhal* or a *croupous* inflammation of the uriniferous tubuli.

Scarlatina is a contagious disease, not only by contact and immediate exhalation, but also by transmission through persons who are not themselves affected. The nature of the poison we do not know. To develop its effects upon the system requires a certain length of time, which is called the stage of *incubation,* lasting from eight to twelve days. The predisposition to take the disease seems to be not nearly as universal as that for taking measles, quite a number of persons escaping it altogether. Infants are mostly exempt from its

attacks; those of all other ages are liable to catch it; scarcely any one gets it a second time. It generally appears as an epidemic, and the different epidemics vary much in character, time of year, and duration; in Philadelphia endemic, every January and February particularly. Its normal progress has been divided into four stages:

1. The *stadium prodromorum* commences with repeated chills, followed by heat, nausea, vomiting, violent headache, and feeling of prostration. The pulse ranges from one hundred and twenty to one hundred and thirty beats per minute, and the temperature of the body ascends to 41° C. and over. This is quite characteristic, as no other disease shows such a rapid increase of pulsation and temperature. Besides these symptoms the patient commences to complain of sore throat, dryness, and burning, and pain when swallowing. On inspection we find the throat red and swollen, and the tongue coated, but red on its edges. This state of things lasts in some cases only a few hours; in others it is entirely absent, the eruption appearing at once, whilst in a majority of cases it lasts one or two days, and quite exceptionally still longer. So, also, varies the intensity of the attack in different individuals; from a mere indisposition, which is scarcely minded, it may at once be associated with stupor and convulsions.

2. The *stadium eruptionis* is almost always accompanied by an exacerbation of the fever. The eruption shows first on the neck, not as in measles on the face, which remains unchanged, presenting only feverish, reddened cheeks. From the neck it spreads further over the body, so that usually in twenty-four or thirty-six hours the whole body is covered. The deepest redness appears on the neck, around the joints, and on hands and feet. Pressure with a finger upon the skin causes, for a moment, a white spot, which speedily grows red again from the *periphery to the centre*, unlike that in measles, which spreads from the centre to the periphery. As the eruption grows and spreads, so, also, grows the angina faucium; and the thick, white fur which had coated the tongue is now peeling off, leaving it red all over with highly-inflamed papillæ, constituting the so-called strawberry tongue. The skin itches intensely. All these symptoms are not, however, in all cases alike. In some the redness may spread almost simultaneously all over the body and be very intense; it may be either scarcely noticeable or of different aspects, as described above; the angina also may amount to scarcely any thing, or be very intense; it may be of a diphtheritic nature, or be combined with catarrh of the larynx or bronchial tubes.

3. The *stadium florescentiæ*, the time, during which the eruption

remains upon the skin, lasts usually from four to five days; about the second day of this stage it stands in its fullest bloom, at the same time the fever and throat symptoms reach their height. The urine contains considerable quantities of cast-off epithelial cells, and frequently traces of albumen; in general the patient is sickest at this stage. It is the climax of the disease. From this time all the symptoms grow milder; the eruption declines, the fever lessens, the angina gradually leaves, and the patient feels better altogether. Yet this is not uniformly the case. The fever may rise anew, because new complications set in; the eruption and angina may disappear too quickly or too tardily, &c.

4. The *stadium desquamationis* sets in usually on the fifth day after the eruption first appeared, and lasts from eight to fourteen days. At first we observe fine white scales peeling off on the neck, the desquamation extending gradually over the whole body. On the hands and feet great flakes of skin are often loosened by the patient himself, as a wholesome pastime after so severe an illness; fever and angina lessen constantly, until finally, in about three or four weeks from the commencement of the disease, perfect recovery takes place. This is the normal course of a simple scarlatina case.

There are other forms, however, yet to be considered. The *scarlatina sine exanthemate*, or *scarlet fever without eruption*, differs from a simple angina by the greater intensity of fever, the deeper invasion of the whole system, its occurrence during an epidemy of scarlet fever, and its premonitory signs.

The *scarlatina sine angina*, or *scarlet fever without sore throat*, is characterized fully by the eruption, the fever, and the prevalence of the disease.

The *scarlatina maligna, typhosa*, is characterized in the following way: In the premonitory stage even, the patient is greatly prostrated, apathic; only half conscious or comatose; the pupils are mostly dilated; there are either simply slight twitchings and jerkings of the limbs, or general convulsions; the tongue is dry; the pulse very small, and scarcely countable; the body is burning hot, with cold extremities. The eruption is either intense, breaking forth suddenly all over, and peeling off very soon in large flakes, as though the skin had been scalded. Such patients die; and, it seems to me, for this physiological reason, that life cannot be sustained if a certain amount of the surface of the skin becomes destroyed. In other cases the eruption does not come out regularly, looks purple, livid, and is mixed with ecchymosed spots; diarrhœa and meteorisms associate, and the tongue and gums

become covered with a black coating. Also such patients die mostly in the second stage, or sink during the stage of desquamation.

Another bad form is that of *angina maligna*, which is generally of a diphtheritic character, and generally complicated with *infiltration of the parotid, submaxillary, and lymphatic glands.* This diphtheritic process extends up into the nose (compare Diphtheritis) and causes a virulent coryza, that much dreaded symptom of scarlet fever, with fetid discharge from the nostrils, and a terrible smell from the mouth. At the same time the whole convolute of the cervical glands swell into lumps; the patient lies in a stupid or comatose state, with his head bent backwards; the pulse ranges from one hundred and forty to one hundred and sixty per minute, and the temperature of the body from forty-one to forty two degrees C. Should this morbid process also extend into the larynx, there are small chances left for recovery. In some cases the inflammation spreads along the Eustachian tubes into the *tympanum*, causing an otitis interna, which may lead to perforation of the membrana tympani, and caries of the petrous portion of the temporal bone.

In other cases the infiltrated cervical glands suppurate, accompanied by a new increase of fever, causing various typhoid symptoms. At this stage not very unfrequently the synovial membranes inflame also, or pleuritis or pericarditis may suddenly set in, followed by an abundant *purulent* exudation.

During the period of desquamation most generally the third localization of the scarlatinal virus takes place, that into the kidneys, causing a *croupous nephritis,* with its subsequent *scarlatinal dropsy.* There are epidemics where almost all patients show symptoms of it—albumen in the urine and dropsical swellings; whilst in others they are only exceptionally observed.

Still another sequelæ of scarlet fever is to be mentioned: *dropsy without albuminuria,* which generally creeps on slowly and may attain to a great height; it is generally not so dangerous as that caused by nephritis.

On the whole, I must say that the different scarlatinal epidemics differ essentially from each other, and so do individual cases in one and the same epidemic.

Rhus - Lach -

Therapeutic Hints.—As a preventative I would still recommend Belladonna high, one dose every night until symptoms appear. If it cannot prevent the attack, it has seemed at least to mitigate its violence. The clumsy imitation by the old school—drop-doses of

the tincture or extract—I would surely not recommend, nor do I wonder that they have not seen any beneficial effects from them.

The terrible burning and itching of the skin is best relieved by rubbing the body all over with bacon (fat part of smoked ham) once or twice a day, always if the skin is dry, glands swollen, scrofulous diathesis.

When the temperature of the body rises to forty-one degrees and over, it has been found beneficial to envelop the whole body in a cold wet sheet.

Where there are many children in a family, those not affected should be kept away from the sick-room.

Acon., rarely, and only in the very beginning of the attack, if characterized by the following symptoms: great dry heat and congestion of the skin; thirst; rapid and hard pulse; great restlessness; headache; peevishness, which revolts against all interference; or at a later period: sudden excruciating pain in the stomach, gagging, retching, vomiting of blood, and stoppage of breath; distressed face, anguish; cold sweat on forehead; gasping.

Ailanthus, "violent vomiting; severe headache; intolerance of light; dizziness; hot red face; inability to sit up; rapid small pulse; drowsy, at the same time very restless; great anxiety; two hours after the first invasion the drowsiness had increased to insensibility, with constant muttering delirium; did not recognize the members of the family; she was now covered, in patches, with an eruption of miliary rash, with efflorescence between the points of the rash of a dark, almost livid color; the patches between the points of the eruption were of a dingy, dull, opaque appearance; the eruption was more profuse on the forehead and face than elsewhere, and especially on the forehead; the pulse was now small, and so rapid as hardly to be counted; the surface had become cold and dry; the livid color of the skin, when pressed out by the finger, returned very slowly; the whole was a most complete picture of torpor." These toxical symptoms, caused by Ailanthus, and observed by Dr. Wells of Brooklyn, simulate so strikingly some forms of scarlatina that it must be a curative agent in such cases.

Ammon. c., hard swelling of the right parotid and lymphatic glands of the neck; putrid sore throat.

Apis is, according to Wolf, indicated in usual as well as in those grave cases where the blood is thoroughly poisoned by the virus, and the whole nervous system under its paralyzing influence; the fever assumes a typhoid character; the tongue is of a deep-red color, and

covered with blisters, which become converted into sores and ulcers, with stinging pains; the nose discharges a thick, white, bloody, fetid mucus; the tonsils are swollen and hard, and the swallowing difficult; the whole abdomen is sore to the touch; the discharges from the bowels are diarrhœic, slimy and bloody; the urine is scanty, and of a dirty red color; micturition sometimes painful; the breathing is accelerated and labored; there is loss of consciousness, delirium, sopor, convulsions, trembling of the limbs; the skin is either burning hot all over, or gradually growing cool, or hot in some and cool in other places; the fever rises constantly, and the pulse changes frequently in character; dropsical symptoms during desquamation.

Arsen., when the eruption delays or grows suddenly pale, livid, or is intermixed with petechiæ; malignant sore throat; different dropsical affections; dyspnœa; extreme restlessness and anxiety; prostration; typhoid symptoms; cold hands; burning heat internally, with a cold external surface; cold perspiration; quick, small pulse.

Arum triphyllum, great soreness of the mouth; redness of the tongue, with elevated papillæ; cracked corners of the mouth and lips; stoppage of the nose without, or with profuse yellow discharge, filling the whole nasal cavity and throat; putrid sore throat; submaxillary glands swollen; urine abundant and pale; eruption all over the body, with much itching and restlessness; during desquamation.

Asclepias syriaca is recommended for dropsy in consequence of nephritis.

Baryta c., swelling of the parotids, tonsils and submaxillary glands, with much saliva, or else dryness in the throat, with pressing, stinging pain on swallowing.

Bell., congestion to the brain, with delirium; on closing the eyes he sees horrible things; wants to sleep and cannot sleep; anxious dreams; starts in sleep; springs suddenly up in bed, or attempts to; throbbing of the carotid arteries; involuntary moving of the hands to the head; bending the head backwards; head hotter than the remaining body; eyes injected; face fiery red, or pale and puffed, or sunken; tongue white, with red edges, or else red all over, with raised papillæ; fauces inflamed, swollen; cannot swallow, or only with greatest difficulty; external swelling of the neck; vomiting.

Bryonia, when the eruption delays or suddenly disappears; beginning dropsical symptoms; pleuritis or meningitis.

Calc. c., after Belladonna, about the third day; great, hard swelling of all the glands about the neck; greatly inflamed throat, with aphthæ on the tonsils and roof of the mouth; the pale, bloated face

shows no signs of eruption; great anxiety and oppression, threatening paralysis of the lungs; scrofulous individuals; longing for boiled eggs.

Camphora, in desperate cases, commencing rattling in the throat; breath hot, forehead hot, with hot perspiration; limbs cold and purple.

Carbo veg., in last stage; rattling in the throat; complete sinking of vitality; cool breath; cool extremities; sticky, cold perspiration.

Coffea, as an intermediate remedy for excessive nervous excitement, sleeplessness and palpitation of the heart.

Colchicum, nephritis; bloody urine, looking almost like ink, and containing albumen; dropsy.

Cuprum, when the eruption quickly disappears, with subsequent convulsions, rolling of the eyes, distortions of the face, mouth and all the flexor muscles; great restlessness, throwing about; sopor; delirium.

Gelseminum has been given in large doses to "control the pulse, calm the nervous erethism, determine the eruption toward the surface, relieve pain and lessen the cerebral congestion." I believe its proper homœopathic sphere of action will be found rather in those asthenic forms of scarlet fever, which from the commencement show marked signs of a general toxication of the blood by the scarlatinal virus, viz.: profound and intense prostration of the whole muscular power; cerebral intoxication; pulse frequent, soft, weak and so feeble as to be sometimes imperceptible; impaired vision; spasms and paralysis. Dr. Morgan gives the following hints: Chilliness, or at least cold hands and feet; heat with *languor* and *drowsiness;* when sleeping, the patient talks in delirious muttering, or half wakes at times; crimson flush of the whole face in all positions; suffusion of eyes, heavy looking; throat feels as if swelled or *filled up*, is diffusely red; tonsils red and slightly swelled; when the eruption recedes, all the viscera are threatened.

Helleb., dropsical symptoms, in consequence of nephritis.

Hepar, after previous abuse of mercury.

Hydrocyanic. ac. has been suggested by Dr. Wells, when the eruption in its early appearance is dark-colored and soon becomes livid, only slowly regaining its color when this is expelled by the pressure of the end of the finger; rapid, feeble pulse.

Hyosc., stupid drowsiness, or else great nervous excitability and sleeplessness; utter stupidity, or else illusions of the imagination and senses; vacant staring at things, or else sparkling, red, prominent eyes; embarrassed, indistinct speech; answers no questions, or else

indistinct muttering loquacity; mouth and throat dry and red; inability to swallow; abdomen distended, tympanitic; watery, involuntary and unnoticed stools in bed.

Iodine, after mercury; ulcers in the throat; glands swollen, suppurating; every thing appears bright blue to him in the distance; worse from warmth and from warm things of all kinds.

Kali c., swelling of the right parotid gland; fever and restlessness; always worse about three o'clock in the morning; smell from the mouth like that of old cheese; great dryness of the skin; œdematous swelling, like little bags, between the eyebrows and upper eyelids.

Lach., diphtheritic inflammation of the throat; ulcers on the tongue; suppuration of the glands of the neck; pleuritic, pericarditic and general dropsy in delayed desquamation, with great oppression; urine almost black; stool badly smelling; fever worse in the afternoon.

Lyc., diphtheritic sore throat; stoppage of the nose; rattling in the throat; comatose state; deafness and purulent discharge from the ears; great peevishness and crossness on getting awake; worse from being covered too much; scanty, dark-red and albuminous urine, with strangury; œdema of the face, hands and feet; ascites; secondary eruption of dark-red blotches on hands, thighs, back or face; colic during desquamation, with costiveness.

Merc., consecutive anasarca and ascites; soreness and inflammation of the genital organs.

Merc. jod., after Lachesis; loss of voice, hoarseness, can only lisp; fauces bluish-red, ulcerated.

Muriat. ac., intense redness rapidly breaking out all over the body in the first hours of the attack with coma; or scanty eruption, which is interspersed by petechiæ; dark redness of the face; purplish color of the skin; burning heat of the body; great anxiety and restlessness, constantly compelling the patient to uncover himself; aggravation in the evening; pulse intermitting in regular intervals; severe angina; dark, bluish-red fauces, aphthæ; foul breath; discharge of thin, acrid pus from the nose, excoriating nose and lips; sighing, groaning respiration; sliding down in the bed.

Nitr. ac., diphtheritic sore throat extending up into the nose, from which discharges profusely a thin, purulent matter; tonsils swollen; tongue dry, fissured; difficult deglutition; indistinct speech; sometimes deafness; *intermitting breathing;* eruption of a fine, miliary nature; skin burning hot.

Opium, convulsions, delirium, and a soporous condition, with snoring, which were not relieved by Belladonna.

Phos., after Mur. ac., although, on the whole, the patient be improving, a suspicious rattle in the throat commences; also by prevailing chest-symptoms; likewise in case of over-sensitiveness of all the senses, and yet there appears an apathetic quietness and don't-care disposition; burning in different parts of the body, which compels change of position.

Rhus t., when, after Belladonna, about the third day the fever be still rising; when the eruption looks dark; when the eyes appear swimming, as if intoxicated; when the tongue grows red and smooth, and a drowsy state, with delirium, sets in; great restlessness; bleeding from the nose at night; rheumatism of the joints, worse in rest; œdema of the scrotum and penis; the swollen, parotid glands break open, discharge ichor copiously; impure, deep cavity, as if one could see into the throat; first the left, then the right.

Secale, watery discharge from the nose and yet a stoppage of the nose; bloody and albuminous urine; cannot bear the heat of the stove.

Senega, oppression; rattling in the chest; loose but feeble cough, with little expectoration; hydrothorax.

Silic., fever worse at night; sleep disturbed by pain in the ears; child wakes up throwing the arms about and screams; puts the hands behind the ears; otitis interna; if sickly after vaccination, or soon after, follows scarlet fever; like to be covered, wrapped up.

Sulphur, rapidly growing red all over, and intensely so with following sopor soon after the first vomiting; burning heat of the skin; eruption at first bright, soon growing purple, attended with diarrhœa, worse in the morning.

Veratr. alb., in hot summers; burning heat changing with coldness of the extremities; small, frequent pulse.

Veratr. vir., according to western physicians, in large doses, rather antipathically, to subdue arterial excitement. The homœopathic indications are yet to be found out.

Zincum, especially in threatening paralysis of the brain; complete unconsciousness; the child lies perfectly motionless; jerking of the whole body, or twitchings of single limbs; grating of the teeth; shrill, frightful screams, with altered voice; cannot speak any more; occiput very hot; forehead cold, covered with cold perspiration; white, pale, distorted face; breathing short and quick, but no rattling; discharge from the bowels and bladder involuntarily; limbs icy cold, and the whole body cool; bluish-red all over; pulse thread-like, scarcely to be counted.

Roseola Febrilis, Rubeola.

This hibrid affection is defined by *Canstatt* as a red-spotted exanthema, which, if we compare its general symptoms with those of the mucous membranes, leaves it doubtful whether to call it scarlet fever, measles, urticaria, or erythema, because it may agree in some points with the one or the other and differ entirely in others. Rubeola, as occurring in epidemics, is either a modified scarlatina or measles. The first, *rubeola scarlatinosa*, corresponds in all its symptoms of the throat and the consequent dropsical affections to scarlet fever, with the exception of the eruption, which is entirely similar to measles. The other, *rubeola morbillosa*, shows all the catarrhal symptoms of measles, whilst its eruption is entirely similar to that of scarlet fever.

Therapeutic Hints. — Compare both Measles and Scarlet Fever.

Variola, *Small-Pox;* Variolois, *Varioloid.*

The nature of the variola-virus we do not know, except by its effect upon the organism. It is regenerated again whilst it develops its effects, and thus propagated from organism to organism. The infectious matter is contained in the variola-pustules as well as in the exhalation from the small-pox patient. Infection takes place, therefore, not only by inoculation or immediate contact with the patient, but also by more remote means. The poison can be carried by other persons in their clothes, or by things which have been in the atmosphere of the patient. It is very persistent in its nature, and may retain its property for years if excluded from the atmosphere, and not exposed to great heat. There is no difference between the virus of small-pox and that of varioloid; either may cause the one or the other disease. This seems to depend entirely upon the susceptibility of the organism, and its adaptation for a greater or less development of its effects. Small-pox and varioloid differ, therefore, only in the intensity of their symptoms. The individual predisposition for taking the disease is wide-spread; no sex, no age, not even the fœtus is exempt; some persons, however, are never affected by it. Those who once lived through an attack are, almost without exception, safe from any further infection. *Vaccination* seems likewise to destroy the predisposition to the disease; if not in toto, at least partially. For, ever since vaccination has become generally introduced, the epidemics

have grown decidedly milder, the majority of cases being varioloids; whilst previous to the discovery of vaccination, the reverse was the rule. Nevertheless, there are epidemics which are still characterized by great malignity, whilst others again are exceedingly mild. It has not been possible to trace out any cause for this difference.

Its course and symptoms. After there are nine days of incubation, the first stage, or the *stadium prodromorum seu invasionis*, begins with a shaking chill, or repeated chilly sensations, which are followed by a permanent heat. The temperature rises in some cases to 41 or even 42° C. This high fever is accompanied with a number of painful symptoms of the head, throat, stomach, and general body; in some cases, with delirium and convulsions. No other, however, is so characteristic of the disease as the *dreadful backache*, with which it is almost invariably associated. The fever rises continually during the first three days, showing only in the morning slight remissions. On the evening of the third day it reaches its height. Only in rare cases is this premonitory stage absent.

The second stage, the *stadium eruptionis*, commences on the evening of the third day. There appear little red spots or papulæ first on the face. If very numerous, they coalesce like measle-spots, with which they might be confounded if it were not for the granulated feel which they present to the sense of touch. On the second day the eruption appears on the neck, chest and back; and on the third day it spreads over the extremities. There are always more papulæ comparatively on the face than on any other part of the body, and when they are so numerous as to coalesce, they coalesce in the face; rarely, if ever, on the rest of the body. *Variola confluentes* can therefore be seen only on the face, whilst everywhere else the papulæ remain isolated—*variolæ discretæ;* or at most only touch each other—*variolæ coherentes*. On the second day the papulæ change into little vesicles or blisters, with a characteristic depression, like a navel, at their centre. As they grow, they fill with a milky, purulent fluid, and thus become converted into pustules. It requires for their full growth about six days; or counting from the time of invasion, nine or ten days. Simultaneously with this eruption on the skin, an eruption of the same character is appearing upon the different mucous membranes. On the conjunctiva, it causes flow of tears, photophobia, and in severe cases total closure of the eyes for many days; in the mouth it causes salivation; in the pharynx, difficulty of swallowing; in the larynx, hoarseness and cough; and in the genitals, itching and burning pain.

The full development of the eruption is generally attended with

great relief to the patient; all the pains lessen and the fever decreases considerably. In cases of variola confluentes only, the relief is not marked. This is, however, not the end of the trouble.

On the ninth or tenth day the fever commences to rise again; it is the beginning of the *stadium suppurationis s. maturationis.* At this time the pustules enlarge still more, the surrounding skin commences to inflame and to swell, and there forms a red areola around each pustule. Redness and swelling coalesce from all sides, and constitute a diffused, erysipelatous appearance of the whole face, greatly disfiguring the patient. This process gradually spreads over the whole body, in the same order in which the eruption commenced to appear. The patient complains of great tension and burning of the skin, and the affections of the eyes, mouth, throat, larynx, and genitals increase in corresponding order. The heat of the body rises again, as above stated, and is frequently mingled with chilly sensations; it rises according to the intensity of the inflammation of the skin; and does not abate until the dermatitis reaches its acme. This renewal of heat is called the *secondary* or *suppurative fever.* It may attain to such a height as to induce symptoms of adynamia and general paralysis, *asthenic, typhoid small-pox.* In other cases it combines with a hemorrhagic diathesis, when the content of the pustules becomes bloody, and bloody extravasation within the skin or hemorrhages from different mucous membranes take place, *hemorrhagic* or *septic small-pox;* or, though only in rare cases, portions of the inflammation mortify and discharge a badly-looking ichor, *gangrænous small-pox.* Besides all this, as the variola-poison is apt to localize during this stage in serous membranes and parenchymatous organs, we meet with a number of different complications, such as, dyspnœa; stitching-pains in the chest; cough; bloody expectoration; pneumonia; pleuritis; pericarditis; meningitis; suppurative inflammation of the joints; periostitis; subcutaneous and inter-muscular abscesses; inflammation and suppuration of lymphatic glands; suppuration of the eyes with hypopyon, and croupous exudations in the larynx and trachea.

The last stage, or the *stadium exsiccationis,* usually commences about the eleventh or twelfth day. The pustules burst and discharge their contents, which dries and forms hard, brownish crusts. There is still some fever at first; it lessens, however, continually, and with it gradually disappear all the painful symptoms which arise from the eruption on the different mucous membranes. The crusts now gradually drop off; at first those which cover the most superficial pustules; they leave dark-red, somewhat elevated spots, which, however, after some

time, entirely disappear. Not so those which form upon deep-seated ulceration. They adhere a long time, and leave, after dropping off, an uneven scar, which looks at first red, but by degrees grows conspicuously white, to remain so for life. In confluent small-pox the destructive process is of a still greater extent, in circumference as well as in depth, and the scars form frequently hideous distortions of the face, similar to the scars of deep burns. This is the course and progress of variola.

Varioloid runs a similar but much milder course; all its stages are milder and shorter; its secondary fever is much less intense, or wanting altogether; and its suppurative process does not destroy the cutis so as to leave scars.

Therapeutic Hints.

Apis, where there is an erysipelatous redness and swelling, with stinging, burning pains; stinging, burning pain in the throat.

Arsen., in asthenic cases, with great sinking of strength, burning heat, frequent small pulse, great thirst, great restlessness, and when the pustules sink in, and their areolæ grow livid.

Bellad., during the first stage; high fever; congestion to the head; sore throat; sleeplessness, with desire to sleep; convulsions.

Bryon., at the commencement, and also when the chest symptoms indicate it.

Camphor., in those dangerous cases where the swelling suddenly sinks in and the pustules suddenly dry up, showing a complete giving out of the life-forces.

Hepar, croupy cough; suppuration.

Hydrastis can. has been given successfully when there was great swelling, redness, and itching; and great soreness of the throat. Is said to prevent the pitting to a considerable degree.

Merc., especially during the suppurative stage; great flow of saliva; dysenteric discharges from the bowels.

Phos., hemorrhagic diathesis; bloody contents of the pustules; hard, dry cough; bronchitis; hemorrhage from the lungs.

Phos. ac., typhoid conditions; subsultus tendinum; great restlessness; great fear of death; the pustules don't fill with matter; some degenerate into large blisters, which burst and discharge a watery fluid, leaving the surface excoriated; watery diarrhœa.

Rhus t., typhoid symptoms, dry, cracked tongue; sordes on the lips and teeth; great debility and restlessness; the eruption shrinks and looks livid.

Sarracenia has been used empirically, and is said by some to shorten and to ameliorate the progress of the disease; others deny it. The short of it is, we do not know any characteristic indications of the remedy as yet.

Sulphur is indicated where there is any tendency of metastasis to the brain during the suppuration; is indispensable occasionally as an intercurrent remedy when others seem to fail; and Goullon advises its uniform use in the stadium exsiccationis.

Tart. em. has been found by some to ameliorate the progress of the disease.

Thuya, recommended by v. Boenninghausen as preventative as well as curative agent. He states that it shortened in an epidemy of 1849, in his neighborhood, all cases, and prevented all scars.

Vaccininum has been used undoubtedly with great benefit in small-pox; its use has shortened and ameliorated all stages quite considerably. Sulphur was given afterwards.

Variolinum makes the progress of the disease much milder; removes quickly all dangerous symptoms; changes imperfect pustules into regular ones, which soon afterwards dry up; promotes suppuration on the third day, and exsiccation on the fifth, sixth, ninth day, and prevents all scars. This is the unanimous testimony of ten physicians who have used it in different epidemics.

Varicella, *Chicken-Pox.*

Some pathologists consider chicken-pox as the lightest form of variola. It may be so. Still, if we consider what experience teaches, that varicella does not extinguish the liability to either cow-pox or small-pox, and that an infection with varicella causes the identical varicella and not variola or varioloid, we obtain rather a strong argument against the identity of the two.

Varicellæ often prevail epidemically, and we also find sporadic cases. They frequently precede, accompany or succeed epidemics of small-pox, measles and scarlet-fever.

They consist, at first, in little red spots, like flea-bites, which in the course of a few hours develop themselves into little blisters, filled with a transparent, straw-colored fluid. The form of these blisters varies, and according to the different forms which they occasionally assume, they have been divided into *varicellæ globulosæ, ovales, lenticulares, coniformes, cuminatæ.* Some of them often fill with pus and become *varicellæ pustulosæ,* leaving, after desiccation, a scar. Their appear-

ance, in most cases, is the first symptom of the disease, without any previous ailment. They spread irregularly over the body, and continue to appear in crops for several days; so that, when the first crop is already in a state of desiccation, a new crop shoots up. In this way the whole process may last fourteen days, and even longer. A similar eruption occasionally takes place upon the mucous membranes, and forms little ulcers in the fauces; but that is not often the case. The general feeling of the patient is not often materially disturbed; though some cases are attended with fever, headache, want of appetite and general indisposition.

Therapeutic Hints.—It seldom needs any treatment. The occasionally attending symptoms may be met by Acon., Ant. cr., Bell., Merc., Puls., Rhus t., Tart. em. Compare Variola.

SKIN.

The skin, as the exterior investment of the body, serves to protect it; at the same time it is the medium by which a continued exchange goes on between the interior organs and the outer world. It is the connecting link between them; the last and lowest of the human frame. Its affections are almost always tokens of some internal derangements, hence their suppression is almost always followed by an aggravation of internal troubles. On the other hand, internal complaints get better in the same degree that the morbid process passes outwardly to the skin. This, we might state in brief, as the essence of Hahnemann's psora-theory, which has been thrown aside by the would-be wise, who never understood it. According to Nunez, the suppression of cutaneous eruptions on the anus is followed by liver complaints; on the legs, by digestive derangements; on the scrotum and penis, by impotence and seminal emissions; behind the ears, by cough and affections of the eyes; on the scalp, by pulmonary phthisis; on the arms and hands, by laryngeal phthisis; in the palms of the hands, by nervous asthma; on the nose and nostrils, by discharges from the ears; on the face, (acne rosacea,) by heart diseases. The skin being easily accessible to ocular inspection and microscopical investigation, its affections have been thoroughly searched and minutely arranged and described, especially by Hebra. It would alone fill a large volume were I to give a minute investigation of this

subject. For such there is no room in a work of this kind. I shall confine myself to a cursory exposition. Besides, several of these affections have been treated of in previous chapters.

I. Hypertrophy of the Skin.

A hypertrophy of *the entire structure* of the skin we find often in single, confined places, constituting so-called *moles*, or *mother's marks*, and *soft warts*. They appear raised above the level of the skin, and, from large deposits of pigment within the rete Malpighii, they are of a dark-brown color and covered by a luxuriant growth of hair.

A hypertrophy of the *epidermis*, hard and horny, constitutes *callosities*, which form on such places as are exposed to external pressure, especially on the hands and feet. *Corns* or *clavi* are callosities, which grow on small, circumscribed places of the feet, in consequence of the pressure of tight shoes. *Horns*, or *cornua cutanea*, consist either in an excessive, circumscribed hypertrophy of the epidermis or in enlarged hair-follicles.

An abundant formation of *pigment* in the rete Malpighii causes a more or less dark color of the skin; when accumulating in confined spots it constitutes, without rising above the level of the skin, *naevi spili*, (mother's marks;) *lentigines*, (liver-spots;) *ephelides*, (freckles;) *chlosmata uterina*, that is, brownish spots on the forehead and upper lip during pregnancy, or in consequence of uterine disorders; and the peculiar darkening around the nipples and the darkening of the linea alba during pregnancy.

A hypertrophy of the *papillary* layer of the cutis constitutes *ichthyosis*.

Ichthyosis, *or Fish-Skin*,

Is, according to Hebra, always of a congenital or hereditary nature. The skin appears dry and rough and covered with thickened and exfoliating cuticle, like scales, all over; with the exception of the face, the inner side of the joints and the scrotum. In light cases the skin presents merely a rough appearance, being covered with fine, white scales, *without any sign of congestion or inflammation underneath*. These light cases are called by some authors *pityriasis;* whilst other writers reckon to pityriasis also those cases where such small, whitish patches of unhealthy cuticle form upon a red, inflamed surface, calling it *pityriasis rubra*. It seems that the latter is a

superficial dermatitis, and has nothing to do with a diffused hypertrophy of the papillary layer of the cutis.

Therapeutic Hints.—Compare Calc. c., Clem., Graph., Hepar, Lyc., Petr., Plumb., Sepia, Silic., Sulphur, Thuya. Rubbing with oil, and afterwards taking a warm bath, is best suited to remove the hard scales.

Hypertrophy of *single papillæ* causes *warts*, (verrucæ vulgares,) and *figwarts*, (condylomata.)

A circumscribed hypertrophy of the *cutis* constitutes so-called polypi of the skin, and the *mulluscum simplex*, a hard, sometimes pediculated tumor.

A hypertrophy of the cutaneous *capillaries* causes *telangiectasias*. Some of them remain stationary through life, whilst others enlarge continually and may give rise to profuse hemorrhages.

II. Atrophy of the Skin.

Atrophy of the *entire skin* takes place in consequence of general marasmus, either senilis or præmaturus, induced by exhausting diseases.

A want of *pigment* throughout the whole skin is congenital to albinos or kakerlakes. A disappearance of pigment in single places of the skin, *vitiligo* or *achroma*, gives, especially to dark persons, a white-spotted appearance.

An atrophy of the *hair-follicles* causes baldness *calvities*, or, as it happens mostly to aged persons, *alopecia senilis*. The falling out of the hair after severe illness depends merely upon a nutritive disturbance of the hair-follicles, not upon a wasting away of the same. Therefore the hair grows again as soon as these nutritive disturbances cease.

A want of pigment in the hair makes it gray and white.

Hyperæmia and Anæmia of the Skin.

A *stagnation* of blood in the cutaneous capillaries, in consequence of heart disease, causes *cyanosis*.

Hyperæmia, or *congestion* of the skin, characterized by redness of the skin, is caused by exposure to heat, by the application of different irritating substances, such as mustard, cantharides, mezereum, &c.; by a blow or fall; by the different exanthematic diseases and fevers of different descriptions.

Anæmia of the skin, characterized by great paleness of the skin, is always associated with a general anæmic state of the system; moreover, it is induced by exposure to cold, and is quite a characteristic sign of chills.

IV. Dermatitis, Inflammation of the Skin.

I. Erythema.

Erythema is characterized by a diffused redness of the skin, which, under the pressure of the finger, disappears, and leaves not a white, but a yellowish spot, which at once grows red again. It gradually disappears and is followed by desquamation; it is always attended with more or less burning pain. Erythema is caused by exposure to heat, the rays of the sun; by different irritating substances. When it occurs in small children between the folds of the skin around the neck, behind the ears, between the thighs, &c., or in fat women under the dependent breasts and becomes raw, it is called INTERTRIGO. The erythma between the buttocks, in consequence of friction from walking in hot weather, is vulgarly called "*Wolf.*" When erythema is the consequence of pressure from lying long in one position, as in severe illness upon the os sacrum, trochanters, or other prominent parts of the body, it is called DECUBITUS. So, also, do we observe erythema, in consequence of acrid discharges from the eyes, nose, bowels, and genitals upon the adjacent parts.

Besides all this there is an erythema, which, without any apparent cause, appears spontaneously upon the back of the hands and feet; in rare cases it spreads over the face and trunk, but never without, at the same time, showing itself upon the back of the hands and feet. It appears in these localities as an evenly-diffused redness and swelling, which, after a short time, becomes covered with smaller, and larger, dark-red, or even purplish-colored papulæ, ERYTHEMA PAPULATUM SEU TUBERCULOSUM. It is always attended with an annoying, burning pain, and in some cases with feverishness. After a few days the redness, swelling, and papulæ disappear, and the whole morbid process winds up with desquamation of the cuticle in the course of eight or fourteen days. In some cases it lasts longer, when repeated crops of papular eruptions follow each other in succession and on different localities.

The ERYTHEMA NODOSUM appears almost exclusively on the lower extremities of young persons. Upon the reddened skin appear

lumps of the size of hazelnuts or walnuts, which are painful to the touch and which have the greatest similarity to bruises, changing their color from red to purple, then to blue, and lastly to green and yellow. This form is always attended with feverishness and ends with desquamation after eight or fourteen days; only in rare cases new crops follow.

Therapeutic Hints.—Intertrigo of infants between the thighs, when attended with acrid diarrhœa, compare Borax, Cham., Merc., Rhus t., Sulphur.

When behind the ears, Graph., **Petrol.**, Sulphur.

In general, Lyc.

Erythema from exposure to the rays of the sun, Acon., Camphor, Canth.

Decubitus, Arn., Carbo veg., China, Fluor. ac., Sulph. ac., &c., compare the corresponding chapters.

Erythema from acrid discharges, compare the corresponding chapters.

Papulous erythema, compare Acon., Bell., Lach., Merc., Rhus t., Sulphur.

Erythema nodosum, compare Arn., Mezer., Lach., Ledum, Lyc., Sulph. ac., Sulphur.

2. Herpes.

The different forms of herpes are characterized by their exudate under the epidermis in the form of globular vesicles, arranged in clusters upon an inflamed patch of the skin, which terminate frequently in the formation of a thin incrustation.

The HERPES FACIALIS appears on the face; when on the cheeks and upon the eyelids it is called HERPES PHLYCTÆNODES; when upon the lips, HERPES LABIALIS, or HYDROA FEBRILIS, *fever-blisters*. This latter form is a frequent attendant upon croupous pneumonia, intermittent fevers, and other febrile diseases. It scarcely ever occurs in typhus.

A special treatment is not required, but its presence may suggest Bry., Graph., Hepar, Natrum m., (especially in intermittent fevers,) Rhus t., Sulphur.

The HERPES PRÆPUTIALIS appears in preference on the prepuce, but also on the scrotum, penis, and on the outer parts of the female organs. Its appearance in clusters of globular vesicles, which are soon covered with a thin crust, distinguishes it at once from chancre.

Hepar or Merc. are almost always sufficient for its removal; and in case of violent itching and burning in females, Caladium seguinum.

The HERPES ZOSTER or ZONA is characterized by its peculiar way of spreading along the course of certain nerves. When it appears on the thorax, the clusters of vesicles occupy the space in which one of the spinal nerves takes its course, commencing near one of the vertebræ and running around on one side of the trunk towards the sternum, thus forming a kind of belt around one-half of the thorax. When it appears on the neck, it forms not only a ring around one side of the neck, but appears likewise upon the trunk and the upper arm, corresponding to the course of the cervical nerves and the brachial plexus. In cases where it starts from the lower lumbar vertebræ, it spreads in a similar manner upon the thigh. Quite seldom is zoster found in the face, and then it occupies one-half of the face in the shape of a belt. Zoster is almost always preceded by rheumatic pains in the parts affected, by fever and debility. There is burning in the parts, then follows redness, upon which gradually clusters of vesicles appear, which often coalesce. In the course of four or six days they form into crusts. This terminates the attack, unless new and fresh crops of vesicles should break forth. The burning pain usually commences to leave when the eruption is fully out, and disappears entirely with the falling off of the crusts. Not unfrequently, however—and this is quite a peculiar feature of zoster—there is developed, after all seems well, an intercostal neuralgia, which is very painful and often quite obstinate.

Therapeutic Hints.

Arsen., severe, burning pain, worse at night, and great restlessness.

Croton tigl., itching and painful burning and redness of the skin; formation of vesicles and pustules; desiccation of the pustules, and desquamation and falling off of the pustules—a close picture of zoster.

Euphorbium.

Graphites, especially on the left side.

Merc. is said by some to be a specific for relieving the burning, and preventing the appearance of new crops.

Mezer. is strongly recommended, and said to prevent and cure the succeeding neuralgia intercostalis.

Puls., where there is gastric derangement; evening aggravation, and a mild, yielding, tearful disposition.

Rhus t., where there is fever, restlessness and itching-burning.

Silic.

HERPES CIRCINNATUS (*ring-worm*) is characterized by its circular form. The vesicles, usually much smaller than in other forms of herpes, appear in a circle, the centre of which is perfectly healthy skin. Sometimes, however, there is one larger vesicle, which not unfrequently is filled with a bloody fluid, right in the centre of the ring, and around the ring appears still another larger ring. This form is called HERPES IRIS. Many of these eruptions are said to be caused by vegetable parasites.

Therapeutic Hints.—Compare Hydrastis, Natr. c., Natr. mur., Sepia.

3. Urticaria, *Nettle-rash.*

This affection is characterized by prominent and perfectly smooth patches upon the skin, the color of which is either redder or whiter than the surrounding skin. They are formed by a serous infiltration of the *papillary layer* of the cutis. The causes of these eruptions are numerous. As such we may mention—1, *Various external irritations*, such as the contact with nettles, or with some kinds of caterpillars and mollusks; the sting of fleas, bed-bugs, mosquitoes, bees; scratching with the finger-nails; 2, *Intestinal irritations* from eating strawberries, crabs, clams, mushrooms; from taking copaiva-balsam; 3, *Uterine irritations*, during pregnancy; menstruation; different uterine diseases, and after the introduction of pessaries.

Entirely unknown are the causes of URTICARIA FEBRILIS, which is chiefly attended by digestive disturbances, and has in its course and progress great similarity with other exanthematic fevers. I have often observed that symptoms which simulated croup, asthma or different other complaints, all at once disappeared as soon as the nettle-rash made its appearance upon the skin. We also find it associated with chills and fever and other febrile complaints. In some cases it assumes a *chronic form*, which it is quite difficult to get rid of.

Therapeutic Hints.

Ant. cr., thick, white-coated tongue; gastric derangement.

Apis, stinging, burning; croupy cough; uterine catarrh.

Arsen., burning; chills and fever.

Bellad., during profuse menstruation.

Bryon., fever and rheumatic pains, worse from motion.

Calc. c., fat, plump children; teething period; chronic form.

Dulc., itching; after scratching, burning; after taking cold; griping pain in the bowels, with nausea and diarrhœa.

Hepar, chronic cases; eruption on hands and fingers; during intermittent fever.

Ign., during the chilly stage of intermittent fevers.

Kali c., during menstruation.

Lycop., chronic cases.

Pulsat., during delayed and scanty menses.

Psorin., after suppressed itch, frequently-repeated attacks of urticaria, with fine vesicles on the top, which dry and peel off in fine scales; regularly coming after any exertion.

Rhus t., itching, burning; skin swollen and red; after getting wet; worse in the cold air; rheumatic pains, worse in rest; fever.

Sepia, chronic; breaks out during a walk in the cold air, and disappears again in the warm room; especially on the face, arms, and thorax.

Sulphur, chronic cases; frequently indicated after Pulsatilla.

Urtica urens, without any concomitant symptoms.

4. Eczema, *Vesicular Eruption.*

Eczema consists in a diffuse, superficial dermatitis, which causes numerous little vesicles upon an inflamed, irregular surface; sometimes these vesicles are intermingled with pustules; at other times the exudation may not be abundant enough to raise the epidermis into vesicles, but only loosens it, so that it dies off and forms a scaly surface; or the epidermis is actually thrown off, leaving a raw, moist surface behind, which, in some cases, becomes covered with a thin scurf; in others, with a thick crust.

Its *causes* are—1. *Direct irritation of the skin* by too high a temperature; hot baths; the application of wet bandages; the rubbing in of mercurial salve, or croton oil; and by various other irritating substances. 2. *Stagnation of the venous blood within the capillaries.* As this takes place most frequently on the lower extremities, we find the consecutive eczema there also, in the form of *salt-rheum.*

3. *A dyscratic diathesis* of scrofulous or rhachitic individuals.

4. In many cases we cannot trace it *to any cause.*

It chooses as favorite localities: *the scalp*, where it is called *tinea furfuracea*, if it causes merely a separation of the epidermis in fine scales; or *tinea amiantacea*, if the dried exudate and the loosened epidermis form a kind of asbest-like layer upon the inflamed surface. Such peeling-off processes are known under the name of *dandruff.*

The face. Here it occurs in all forms, and has received many differ-

ent names: *eczema impetiginosum* and *rubrum; porrigo larvalis, tinea faciei, crusta lactea, crusta serpiginosa*, &c.

The genital organs, in males the *penis* and *scrotum*, and in females the *labia majora*. It is either acute or chronic; the latter especially when on the scrotum. By its terrible itching it drives one almost to madness. It may appear also upon the perinæum, and around the anus.

The inner side of the thigh, just where the scrotum touches it. This is called *eczema marginatum*, and has been observed especially in shoemakers and cavalry-men. It commences on the inner side of the thighs, just where the scrotum touches it, but soon appears also on the corresponding place of the other thigh.

The legs. Here it forms a large, red, raw, constantly-secreting surface; sometimes covered with thick crusts. This is called *salt-rheum.*

The bends of the extremities. The scanty exudate generally dries with the loosened epidermis, and forms a brittle covering; which, on motion of the limbs, cracks in different directions. Sometimes the secretion is more profuse, and keeps the affected parts constantly moist.

Hands and feet. It is a peculiar fact, that hands and feet are attacked almost always simultaneously. When it appears on the dorsal side, it generally assumes the form of simple eczema or vesicles, and may be confounded with itch. On the palms of the hands or soles of the feet it scarcely ever occasions vesicles, but causes the epidermis to peel off in the form of white scales; for which reason it has been called *psoriasis* or *pityriasis palmaris* or *plantaris.* The progress of the disease is seldom acute; all forms are characterized by great itching; and scratching is apt to spread the affection further.

Therapeutic Hints.—In selecting the remedy for such affections, the constitutional symptoms must never be lost sight of. I can give hints only to local symptoms, as the other would lead too far, and still could not meet all the possible complications.

Eczema *on the scalp*, compare:

Arsen., generally dry, scaly eruption, sometimes fetid, purulent secretion, with nightly burning or terrible itching; better from external warmth.

Baryta c., moist crusts, with falling off of the hair; glandular swellings on the neck and under the lower jaw.

Calc. c., thick crust, moist or dry, with scrofulous diathesis.

Clematis, the eruption looks inflamed during the increasing, and dry during the decreasing moon.

Graphites, impetiginous eruption; soreness after scratching; worse on left side and in the evening; sticky secretion.

Hepar, purulent secretion, itching and sore, worse in the morning and on the right side.

Lycop., thick crusts, with fetid secretion underneath; bleeds easily after scratching.

Merc., yellow crusts, stinging, burning; the surroundings inflame easily after scratching.

Natr. m., raw, inflamed surface, discharging continually a corroding fluid, which eats away the hair; boundaries of the hair.

Rhus t., thick, moist crusts; tingling, stinging, burning, especially at night.

Staphis., yellow, acrid moisture oozes from under the crusts; upon the denuded surface form at once new vesicles which again burst. By scratching one place the itching ceases but appears at another place.

Sulphur, crusts and pimples itching spontaneously, especially at night; easily bleeding.

Besides, compare Anacardium, Ant. cr., Borax, Cicut., Cyclam., Dulc., Kali bichr., Nitr. ac, Oleander, Phos., Sepia, Silic., Thuya.

Eczema *on the face*, compare Arsen., Bell., Borax, Calc. c., Clemat., Cicuta, Croton tigl., Cyclam., Graph., Hepar, Lyc., Merc., Natr. m., Rhus t., Sepia, Staph., Sulphur.

Eczema *on the genital organs*, compare Argent. nitr., Arsen., Calad., Croton tigl., Graph., Hepar, Lyc., Natr. m., Nitr. ac., Petrol., Rhus t., Sep., Sulphur, Thuya.

Eczema marginatum, compare Natr. m., Sepia, Sulphur.

Eczema *on the legs, salt-rheum.* As this affection is the result of stagnation in the venous circulation, it will be a great service to bandage the limbs tightly. Amongst the remedies compare Arsen., Calc. c., Carbo veg., Graph., Lach., Lycop., Merc., Natr. m., Rhus t., Sarsapar., Sepia, Silic., Sulphur.

Eczema in the bends of the extremities, compare Ammon. c., Bry., Calc. c., Graph., Ledum, Merc., Sepia, Sulphur.

Psoriasis, or pityriasis palmarum, or plantaris point to Magn. c., Ranunc. bulb., Rhus t., Sepia, Sulphur.

5. Impetigo, *Pustular Eruption.*

It differs from eczema only by its pyogenic tendency. As, however, the contents of the eczema-vesicles frequently become milky

and purulent, no distinct line of demarcation can be drawn between these two skin-affections. In fact, many of the eruptions cited under eczema of the scalp and face may, with equal propriety, be classed under impetigo. Its causes are the same as those of eczema. In addition, we find this form especially in scrofulous subjects, in whom there is a great vulnerability of the skin, so that any little irritation or wound of the skin at once begins to fester. We also find it sometimes after vaccination sprouting forth over the body.

The eruption of the impetigo is sometimes attended with fever; a part of the skin reddens, burns, and itches, and now little pustules appear, which after a while burst and form yellowish, brownish, or greenish crusts; they gradually dry and fall off; in about ten or fourteen days all signs of it have disappeared. In other cases this process goes on for a long time, as constantly new pustules arise and the first-affected parts of the skin still go on to secrete a watery fluid—*chronic impetigo*. The scratching with the nails is especially apt to spread the affection, and it may, in this manner, be even transmitted to other persons. When the pustules appear singly it is called *impetigo sparsa;* when in groups, *impetigo figurata;* and when upon a highly-inflamed surface, *impetigo erysipelatodes*.

Therapeutic Hints.—All that has been said under eczema is applicable here. All the constitutional diseases must be considered. If Hebra and his echoes assert that it be pure imagination of an erroneous idea of the natural processes in the human body to suppose that eczema, if cured by external means, (*id est,* by being suppressed by green soap, Kali causticum, Tar, &c.,) could ever do any harm; we leave them to grow wiser by closer observation, and stick to old Hahnemann and our own experience. There is no distinct line of demarcation between eczema and impetigo. The latter is admitted by Hebra himself to be in connection with scrofulous diathesis; why not the eczema? If the one be the expression of a general contamination of the system, why not the other? But it is so much easier to cut off the fruits of a tree than to root out the tree itself.

6. Ecthyma, *Isolated, Large Pustules.*

Upon a red and swollen surface appear single pustules of the size of a pea, which contain a *yellow,* purulent, or *dark-colored* fluid if there be blood mixed with it. They are surrounded by a red areola, and

appear most frequently upon the extremities, on the seat, on the chest, and on the neck; less often on the face. Ecthyma is almost always attended with stinging pains, and in irritable persons with slight fever. In the course of a few days the contents of the pustules dries and forms a round, brownish crust which soon drops off, without leaving a scar behind. Sometimes, however, the crust adheres longer, and there forms beneath it an ulceration which even eats into the cutis. In chronic cases the eruption of such pustules goes on repeatedly for a long time.

The causes of ecthyma are like those of eczema and impetigo: external irritation, especially antimonial salves, fresh lime upon the hands of bricklayers, red-hot-iron sparks upon the hands of blacksmiths, &c. We meet it, likewise, during the course of febrile diseases, like hydroa, during itch, and in consequence of protracted diseases, poor living, cachectic, scorbutic and syphilitic conditions.

Therapeutic Hints.—Compare Ant. cr., Arsen., Calc. c., Lach., Lyc., Nitr. ac., Silic., Sulph., Tart. em.

The general constitutional indications must never be lost sight of.

7. Pemphigus, Pompholyx, *Isolated large Bullæ or Blisters.*

Upon a red, inflamed, but not infiltrated surface, appear pretty large blisters, which are filled with clear serum and much resemble those occasioned by burns or fly-blisters. About their causes nothing is known, except that if they occur in new-born children they are of a *syphilitic* origin, and in grown persons they are symptoms of some general dyscrasia or cachexia.

The acute form of this affection is extremely rare. It is always attended with pretty high fever, and general indisposition, and lasts about fourteen days. Renewed outbreaks may prolong it much longer. The chronic form of pemphigus, which may grow out of an acute attack, lasts months and even years. One crop after another appears upon the skin, showing the bullæ in all the phases of their development: the youngest are transparent, the older have a milky appearance; then they burst and leave an excoriated surface. This raw surface still continues to secrete serum, and is finally covered with a thin crust. The worst form is PEMPHIGUS FOLIACEUS. It begins with a single blister, which is continually increasing, until the whole surface of the body is literally skinned and then covered by a brownish crust. It is said to have a fatal termination.

Therapeutic Hints.—Compare Arsen., Canth., **Caust.**, China, Dulc., Kreas., **Lach.**, Merc., **Ranunc. bulb., Rhus t.**, Sulph.

8. Rupia or Rhypia, *Isolated Blisters, which form thick crusts.*

The bullæ contain a purulent reddish matter, which gradually dries and forms a thick, dark crust. Underneath this crust matter continues to form, which again dries and consequently raises the centre of the crust, whilst on the periphery it becomes encircled by a vesicated border, which again dries up into a crust. And as this latter is much thinner than the first which has been successively heaped up, the whole assumes a great similarity to an oyster-shell. On removing the crust we find a deep, foul, excoriating ulcer. Rupia is said (by Hebra) to be always of syphilitic origin.

Therapeutic Hints.—Compare Syphilis.

9. Furunculus, *Boil.*

A furuncle consists in an inflammation of one or several closely-grouped cutaneous glands, the follicles of which at first become infiltrated. By-and-by the inflammation spreads to the surrounding cellular tissue, extends through the covering skin, and, accompanied by acute pains, and even fever, finally perforates the skin and discharges a bloody matter; the core, however, (which is the infiltrated follicle enveloped in cellular tissue,) is not discharged until all of it has been loosened from its surroundings. Large boils generally occur singly; of small ones, so-called *blind-boils*, which discharge very little, or nothing at all, there frequently appear several at a time, or in rapid succession, and may torture the patient for a considerable length of time. Their exact cause is unknown. We sometimes find them prevailing almost epidemically, and they frequently appear during the reconvalescence from severe illness.

Therapeutic Hints.—Never use the lancet or have it allowed to be used, because it never does any good, but always harm, as it increases the inflammation and protracts the healing process.

For *large* boils compare Apis, Crotal., Hepar, Lach., Lyc., Merc., Nitr. ac., Silic., Stram.

For *small* ones, Arn., Bell., Nux v., Sulph.

For a *disposition* to boils, Arsen., Calc. c., Lyc., Nux v., Phos. ac., Silic., and Sulph.

10. Carbunculus, *Carbuncle.*

The carbuncle commences with severe pains in the part affected, which are mostly of a burning character, and continue to be so through the whole course. The painful spot now commences to discolor; it generally assumes a purplish hue; and it gets hard and swollen. After five or six days we observe numerous little holes forming in the raised and discolored place, out of which project yellowish spots of a mattery substance. By this time the swelling, hardness, and discoloration may still increase, as well as the extent in circumference. Only a little pus is discharged from the small holes. They, however, gradually widen and coalesce, until by degrees a considerable portion of the cutis is entirely destroyed. Now we observe the decaying cellular tissue underneath; the pus discharges more copiously, and with it large pieces of decayed cellular tissue (sloughs) are thrown off. The loss of substance sometimes amounts to several square inches. This process is always attended with considerable fever, and is quite apt to assume an adynamic character. When complicated with cerebral symptoms, which are the consequence of the absorption of the pus into the blood, such cases may terminate fatally. In more favorable cases there appear at the bottom of the wound new granulations, and by a slow healing process the whole lost substance is finally restored.

Carbuncle differs entirely from furuncle. It is of a much more destructive character, appears principally on the nape of the neck or along the spine, and attacks chiefly aged persons; whilst furuncle is never associated with gangrenous destruction of substance, appears here and there and everywhere, and attacks all ages alike.

Therapeutic Hints.—No knife. But compare:

Anthracinum, when the burning pain is violent and not relieved by Arsenicum; cerebral symptoms; absorption of pus into the blood; gangrenous destruction. A carbuncle on the back of a man, some sixty years of age, had attained a size of nine inches in length, and five inches in its greatest width. There was sloughing; abundant discharge of ichorous, terribly smelling pus; and poisoning of the blood by absorption of pus. Arsen. had no beneficial effect; Anthracin. relieved at once. Ever since then I have given Anthracin. in several cases, where there were symptoms of the same destructive character, with the same beneficial result.

Apis, when the erysipelatous inflammation extends further and further.

Arsen., great burning; great restlessness; great thirst, with drinking but little at a time; great debility; all the symptoms are worse in the night, and better from external warm applications.

Bell., bright redness; throbbing pain; drowsiness, with inability to go to sleep.

Carbo veg., dark, blackish appearance; fetid odor.

Kreosot.

Lach., bluish, purplish appearance; inability to bear any bandage around the neck; cerebral symptoms.

Nitr. ac.

Rhus t., great restlessness; feels somewhat relieved of the violent pain as long as he is in motion.

Secale.

Silic., during the process of ulceration; it seems to clear the wound of its decayed masses, and to promote healthy granulation.

II. Panaritium, Paronychia, *Whitlow, Run-Around, Felon.*

It is an inflammation on the thumb or on one of the fingers, which terminates in suppuration. There are two distinct varieties of this inflammation, a superficial and a deep-seated one.

The *superficial* form, WHITLOW, RUN-AROUND, is generally seated immediately around and beneath the nail, commencing either at the side of the finger upon its dorsal surface, or at its extremity. Without much, if any swelling, the part is of a dusky reddish aspect, tender on pressure, and exquisitely painful, throbbing violently and incessantly, and causing more or less constitutional disorder. Two or three days after these phenomena present themselves, matter is observed in the finger, lying just beneath the epidermis, which is elevated into a yellowish vesicle at the side and root of the nail. In many cases pus is also situated below the nail, especially at its posterior extremity; and sometimes, again, it is found chiefly, if not exclusively, in the cellular substance immediately beneath the true skin. The inflammation generally extends some distance up the finger, and occasionally even over a considerable portion of the hand, which may be a good deal swollen, stiff and painful. Not unfrequently a reddish line, indicating the course of an absorbent vessel, is seen running along the limb, as high up, perhaps, as the axilla.

In the *deep-seated variety*, FELON, the inflammation involves all or

nearly all the structures of the finger, and is frequently followed by the destruction of one or more of the phalanges. The pain is of extraordinary severity, depriving the patient of sleep for days and nights together; throbbing, tensive and diffused, often extending as high as the elbow, and even to the shoulder; steady and persistent, but greatly aggravated by a depending position, and only subsiding with evacuation of the inflammatory deposits, or the death of the parts. The swelling also is great, sometimes enormous, involving both finger hand and wrist; the skin is red and œdematous, puffy, erysipelatous in aspect, and the whole limb is often stiff and useless. In consequence of the inflammatory action, pus will form deep among the tissues, in the connecting cellular substance, within the sheaths of the tendons, and beneath the periosteum; and spreading in all directions, will cause extensive destruction, burrowing along the finger and hand. In neglected cases even gangrene may occur, followed by sloughing of the tendons, and exfoliation of the phalanges. This grave form is always attended with well-marked constitutional disturbance. The patient, tortured with pain, is feverish and unable to sleep; his appetite is lost; his head, back, and limbs ache; the face is flushed, and the pulse is strong, hard and frequent. In some cases delirium is present. (Gross.) Causes unknown; no doubt of a psoric nature.

Therapeutic Hints.

Anthracin., where there is sloughing, with terrible burning, and Arsen. gives no relief.

Apis, according to Wolf, specific especially after the abuse of Sulphur; the characteristic pain is burning-stinging.

Arsen., when the sore assumes a gangrenous aspect; burning like fire, and anxious restlessness; worse about midnight.

Bryonia in the commencement, where there is a gastric-rheumatic disposition; white or yellowish-coated tongue; dry feeling in the mouth, without thirst, or great thirst; bitter taste in the mouth; dry, hard stool, as if burnt.

Caust., recommended by Goullon, to be used externally and internally.

Graph., according to Kreussler, superficial inflammation about the root of the nail, with burning and throbbing pain, and subsequent inflammation and proud-flesh.

Hepar, violent, throbbing, "gathering" pain; it accelerates suppuration.

Juncus effusus, recommended by Minnichreiter, who applied the pith of this plant upon the panaritium with greatest success.

Lach., according to Hering, in severe cases, where the inflamed portion assumes a purplish hue, or becomes gangrenous.

Ledum palustre, when the whitlow is the consequence of external hurts, as splinters, &c.

Lyc., when there are the following constitutional disturbances: frequent belching, bloatedness of the region of the stomach and belly; pressure and heaviness and sometimes throbbing in the precordial region; burning in the stomach and œsophagus; nausea; sensation of twisting, crawling and emptiness in the stomach, accompanied by frequent yawning; congestion to the head; cold feet; dry stool; red, burning urine; mental irritability.

Merc., when the inflammation extends to the sheaths of the tendons and ligaments of the joints.

Natr. sulph., suppuration at the root of the nail, with deep-red swelling of the whole phalanx, and great painfulness: the patient looks sickly and pale; feels, especially in the morning, weary and dull in the head; has no appetite, and is chilly and feverish in the evening; the pain is easier out of doors than in doors. Prominent causes: damp region, damp walls, damp cellars.

Rhus t., where there are rheumatic pains in the limbs; worse during rest and on beginning to move; sensation in the limbs of going to sleep and formication; tired feeling and sweating from any little exertion; erysipelatous redness of the inflamed part.

Silic., deep-seated inflammation; affection of the bone; proud-flesh; terrible pain; worse in bed.

Stram. is most important when the pain is almost unbearable, driving to despair. It ameliorates it at once, and hastens benign suppuration.

Sulphur, according to Wolf, when Apis is not sufficient on account of latent psora.

12. Psoriasis, *Tetter.*

It consists in a chronic dermatitis, with infiltration of the corium and a morbid condition of the epidermis. The effusion upon the corium is not abundant enough to raise the epidermis into vesicles. It causes a mere hyperæmia of the skin, in consequence of which the papillary layer produces a sickly epidermis, which soon loosens and drops off in scales. Its *causes* are quite obscure. In some families it is hereditary. Quite young children, and quite old persons are seldom attacked by it. This affection commences in small, red, somewhat

elevated, roundish spots, like drops, which are soon covered with dry, white scales—PSORIASIS GUTTATA. When the spots increase in number, they necessarily coalesce as they grow, and form large irregular surfaces, which are covered with scales of various thickness and adhesiveness—PSORIASIS DIFFUSA, of *Willan*. They accumulate sometimes in round patches. Whilst on the periphery still new spots appear, those in the centre dry up, and this gives rise to a circular eruption—PSORIASIS ANNULATA, (*ring-worms.*) Or, several of such circles meet; their peripheric lines are broken off by already healed up centres, and now they form various figures, parts of circles, straight lines, &c.—PSORIASIS GYRATA. In some cases this morbid process continues for a great while, and causes the skin to become thickened, rigid and cracked. This takes place especially in the diffuse and irregular forms; then it is called PSORIASIS INVETERATA. The favorite places for psoriasis are the extensor-sides of the extremities, especially the knee and elbow. In many cases the disease is confined to these localities. Frequently it appears symmetrically on both sides of the body, similar to eczema. Sometimes it is found on the eyelids, lips, prepuce, scrotum and labia majora. The so-called PSORIASIS PALMARIS and PLANTARIS, by which the redness and infiltrated surfaces of the palms of the hands and of the soles of the feet are covered with dry scales, belongs to eczema, and its circumscript form is always of a syphilitic origin.

Therapeutic Hints.—Compare Arsen., Calc. c., Clem., Corall. r., Nitr. ac., Petr., Phos., Phos. ac., Psorinum, Sepia, Sulph., Tellurium.

13. Lichen, Strophulus.

This affection consists in a dermatitis forming conical pimples in groups. The exudation causes no formation of vesicles, but infiltrates and swells the cutis to little, solid pimples or papulæ. In children during teething it is called STROPHULUS—*prickly heat.* We observe little, conical elevations of the size of millet-seeds, generally of a reddish color, or of the normal color of the surrounding skin, or even paler than natural. They may be confined to single groups or extend over a large surface. Usually they are attended with some slight itching, and generally disappear after desquamation in the course of some twelve or fourteen days. This is

LICHEN SIMPLEX. Its causes are obscure; *heat,* however, or irritations in the intestinal canal seem to have some relation to its appearance.

LICHEN AGRIUS is a somewhat graver form; its outbreak is often attended with some fever; the skin appears inflamed and is the seat of a great deal of itching and burning. If the inflammation continues it may assume the character of eczema. Repeatedly-renewed outbreaks cause the skin to thicken and become rigid and cracked, and thus assume all the characteristics of psoriasis.

Therapeutic Hints.—Lichen simplex needs no remedial aid. For Lichen agrius compare Arsen., Con., Graph., Lyc., Nitr. ac., Sulphur.

14. Prurigo, Pruritus.

Instead of conical pimples, as found in *lichen*, prurigo exhibits flat papulæ, which have the same color as the surrounding skin. When broken they discharge a small drop of a clear fluid, and are attended with an intolerable itching. Want of personal cleanliness, of the proper change of clothing, and poor and unwholesome food are probably its most frequent causes. Hebra asserts that it is found only in the poorer classes of the people. With the exception of the first years of childhood it is found in all ages, and more frequently in men than in women. The flat papulæ, which at first appear singly, and which may even be difficult to detect by sight, as they do not differ in color from the surrounding skin, cause a most terrible itching, which incites the person to scratch. Hereby the papulæ become denuded of their epidermis; they bleed, and the exuding blood forms dark crusts upon the scratched localities. Thus, it closely resembles in appearance the torn surface by scratching, in consequence of itch or lice. Prurigo, however, has favorite localities, differing from either itch or lice. Whilst the acarus prefers to locate between the fingers, in the bends of the limbs, and on the belly; and lice take their abode in preference where the shirt lies in folds, on the neck, around the waist, &c., prurigo is found principally on the extensor sides, especially of the lower limbs and on the back; a feature decidedly distinguishing prurigo from itch. The finding of the acarus or of lice would settle the question. But even then there might be a complication between pruritus and itch. The spotted appearance of the skin is nothing but the necessary consequence of the violent and continued scratching. The skin being continually torn, there form not only simple crusts, but the surface commences to fester and to cicatrize.

Milder cases of prurigo, where the disease is confined to the lower extremities, are called *prurigo mitis;* graver cases are called *prurigo formicans.* Those which are confined to the anus, penis, scrotum, or vulva, *prurigo pudendorum,* are related to eczema.

The disease has its remission during spring and summer, and its exacerbations during fall and winter.

The effects of prurigo upon the general organism grow the more apparent the longer the disease lasts. The constant, unbearable itching, which destroys all comfort, rest, and sleep, wears the patient out, and has led some to utter despair and suicide. There is also combined with this disease a remarkable tendency to rapid, serous exudations into the serous membranes of the brain and lungs; a tendency to aberrations of the mind and to tuberculosis.

Therapeutic Hints.—Compare Arsen., Calc. c., Carbo veg., Dolichos pruriens, Graph., Nitr. ac., Sepia, Sulphur, and many more, according to special indications of the individual case.

15. Scabies, *Itch.*

Itch, namely, acarus-itch, is a dermatitis, which is caused by a parasite, called *acarus scabiei seu sarcoptes hominis.* This insect burrows itself into the skin in order to find shelter and to deposit there its eggs. This causes the inflammation, which produces papulæ, vesicles, and pustulæ. It is always attended with great itching, and especially at night, when these animals are the liveliest, leave their holes and pay each other visits. One pregnant female acarus, if it be transp'anted to another person, is sufficient to invest this person with the itch. Her eggs ripen in about eight or ten days; the youngsters creep out and do exactly as the old ones did; the mischief is done. Infection takes place, therefore, most readily if one happens to sleep with another who has the itch; but also by shaking of hands, by clothing, by using the same towel, &c., the female acarus may be transplanted. This fact makes itself known first by an intolerable itching on those parts, which the acarus seems decidedly to prefer. These are the hands, especially between the fingers, the cleft of the nates, the bends of the extremities, the abdomen, and the genital organs; never the face. It seems that this terrible itching is caused not only by the action of the insect in burrowing itself into the skin, but also by an acrid juice, which it probably secretes. The objective signs which now follow are the above-mentioned pimples,

vesicles, and pustules, on account of which the books speak of a *scabies papulosa, vesiculosa,* and *pustulosa.* The most characteristic signs of acarus-itch are, however, the little furrows which are dug by the insects. They present dotted, irregular streaks, which have great similarity to little scratches of a needle. At their commencement is generally a vesicle, seldom a papula or pustule; at their end, a little ways from the vesicle, sits the insect, appearing as a whitish speck. By carefully entering this small channel with a fine needle the perpetrator may be pierced and extracted.

Itch never heals spontaneously; and the more the insects multiply, the worse it grows. The original irritation caused by the insects, and the additional one by scratching, causes the whole eruption to assume the form of eczema and impetigo, with vesicles, pustules and crusts of different sizes.

General Therapeutic Remarks.

The old school considered it a great triumph when, in the year 1834, by M. Renucci, a young Corsican in Paris, who had learned in his native island the art of extracting the little animal, the question about the nature of itch seemed to be settled. Hahnemann's psora-theory had thus been exploded by a needle in a Corsican's hand, and with it, all Homœopathy! They simply forgot, in their heart's delight, that before that time many other cutaneous eruptions were considered as itch; amongst them, as Hebra himself supposes, pruritus, with its undoubted metastases to inner organs. If we now take a glance over Hahnemann's masterly picture of what he calls psora, we shall at once perceive that, under psora, he did not understand acarus-itch solely, but gave a tout ensemble of chronic cutaneous affections in general. The child had to have a name, and psora was as good a name as eczema, impetigo, prurigo, or any one else. Thus the needle, although it found the acarus, missed altogether Hahnemann's psora. It is just as true to-day that a suppression of cutaneous eruptions, of various kinds, will be followed by disastrous consequences upon the general system, as it was true when Hahnemann and others observed it. Instead, then, of desiring to have Hahnemann's psora-theory wiped out of the pages of Homœopathy as a disgraceful spot, we ought to be proud of our old master's keen observation. But then we must understand him rightly! I admit that, in recent cases of acarus-itch, the killing of the animal is the shortest procedure to cure, without detrimental effects upon the organism. This end may be attained not only by the external application of *sulphur and mercurial*

salves, but also by *peruvian balsam* or the *twigs of the balsam poplar tree*, *populus balsamifera*, (L.,) *Tacamahac*, (Ind.,) which secretes a kind of resinous substance on the pedicles of its leaves and around its twigs. But as it is an undoubted fact that *itch never heals spontaneously*, and as we have likewise undoubted facts that itch has been cured solely by the internal application of homœopathic remedies, it seems that those who contend that even acarus-itch in the course of time is not altogether a mere local, cutaneous trouble, are after all deserving some credit. All parasites, no matter whether animal or vegetable, can grow only upon a suitable soil; if this soil be made insupportable to them, they die or leave, and this is as good as killing, regarding the riddance of the intruders; but it is infinitely better for the patient, as by this means the organism is not injured, but brought into a healthy state.

Special Hints.

Arsen., inveterate cases: eruption in the bends of the knees; pustulous eruption; burning and itching; better from external warmth.

Carbo veg., eruption dry and fine; almost over the whole body; worst on the extremities; itching worst after undressing; dyspeptic symptoms; belching of wind and passing flatus; after the abuse of mercurial salves.

Caust., after the abuse of sulphur and mercury; yellowish color of the face; warts in the face; involuntary discharge of urine when coughing, sneezing or walking; sensitiveness to the cold air.

Hepar, fat, pustulous and crusty itch; also after previous abuse of mercury.

Mercury, fat itch, especially in the bends of the elbows.

Psorinum, inveterate cases; with symptoms of tuberculosis; also in recent cases; eruption in the bends of the elbows and around the wrists; repeated outbreaks of single pustules, after the main eruption seems all gone.

Sepia, after previous abuse of sulphur; itching worse in the evening; especially in females.

Sulphur, main remedy; voluptuous tingling-itching, with burning and soreness after scratching.

Sulph. ac., when itchiness of the skin and single pustules appear every spring, after a not perfectly-cured itch.

V. Anomalies in the Secretions of the Skin.

The secretion of *gaseous substances* is either *augmented*, for example, in fevers, when the temperature of the body is considerably raised, and in a hot atmosphere; or it is *diminished*, when the air is damp and its temperature low. In disease, a diminution of gaseous secretion has been ascertained by actual measurement only in diabetes mellitus.

The secretion of *watery substances*, which is called perspiration or sweat, may be promoted in any healthy person by drinking large quantities of water, and covering with a thick blanket; by strong exercise of the body; by the heat of the weather, &c. In disease it is sometimes entirely wanting; at other times, a very prominent symptom, for example, in pneumonia, in some forms of rheumatismus acutus, &c. Some persons are much more inclined to sweat than others; an excessive inclination to sweat is called HYPERIDROSIS. It seems that repeated sweatings increase the inclination to it. When the fluid which is secreted in the sudorific glands cannot pass freely upon the surface, either because the sudorific ducts are stopped up, or because they are too narrow to give vent to all the fluid which is produced within the glands, we observe the fluid to collect under the epidermis, and to raise it into numerous little vesicles, which contain a perfectly transparent fluid of an acrid reaction. This state of things is called

Sudamina, *or Miliary Rash.*

The stoppage of the outlets of the sudorific glands occurs most frequently in diseases in which there has been great dryness of the skin previous to the outbreak of the sweat, as, for example, in the first weeks of typhus. The appearance of the eruption has no influence upon the course of the disease; it is observed as well in critical sweats as in those which break out sometimes when the disease takes a bad turn and may even appear during the last struggles of agony. When the transparent, minute vesicles appear upon a naturally-colored skin, it is called *miliaria alba;* when upon a skin which is reddened by hyperæmia or hemorrhagic effusions, it is called *miliaria rubra.* As a symptom, it may indicate Arsen., Bry., Calc. c., or Ipec.

Quite frequently do we find *partial hyperidrosis* on the palms of the hands, on the soles of the feet, under the arm-pits and on the genitals. The sweat of the feet, in the axillæ and on the genitals, is often excessively offensive, which seems to have its cause in a decomposition

which the sweat, the sebaceous secretion and the softened and loosened epidermis undergo. The suppression of these partial sweats has been considered from olden times as very detrimental to health, causing spinal affections and different other complaints. In later times this has been reversed; now they say: intercurring diseases stop this partial sweating. May be, may be not. So much is certain, and I have observed many a time that the cessation of partial sweats stands in closest relation with various general complaints, and that the patient does not get better until the general foot-sweat or axilla-sweat, &c., is re-established.

Therapeutic Hints.—Compare any Repertory.

Suppressed foot-sweats indicate especially Apis, Cupr., Nitr. ac., Puls., Sepia, Silic.

A *diminution* of fluid secretion, causing great dryness of the skin, often attends marasmus senilis. Sometimes it is a disturbed innervation, and sometimes the consequence of skin diseases. Besides, there are cases of ANIDROSIS and even of *half-sided anidrosis*, for which there is no explanation.

A *qualitative change* in the secretion of sweat takes place in icterus, which colors the linen yellow, and in suppressed urinary secretions, when the sweat contains urinary ingredients.

The secretion of *sebaceous substances*, if diminished, causes great dryness and brittleness of the skin; if augmented, (*seborrhœa,*) it forms crusts upon the scalp, especially in children, or on the cheeks, nose, eyelids, ears and nipples, especially in females who irregularly menstruate. A thickening of it within the excretory ducts causes *comedones, milium* and *atheromata.*

A COMEDO has a dark surface from the dust and dirt outside, which has been mixed with it.

A MILIUM is a collection of hardened sebum within the extended follicle; being covered by the epidermis it shows no dark, dirty point.

ATHEROMATA are enormously enlarged sebaceous glands, which are filled by thickened and hardened sebum; they are always united with the hair-follicle, with which they have a common outlet, and may reach the size of a hazelnut or even a walnut.

LIST OF REMEDIES.

Acon., Aconitum Napellus, now Aconitum Stoerkianum.
Aescul. glabra, Aesculus glabra.
Aescul. hipp., Aesculus Hippocastanum.
Aethusa, Aethusa Cynapium.
Agaricus, Agaricus muscarius, now Amanita.
Agave Amer., Agave Americana.
Agnus cast., Agnus castus s. Vitex A. c.
Ailanthus, Ailanthus glandulosa.
Aletris far., Aletris farinosa.
Alnus rubra, Alnus rubra.
Aloes, Aloes soccotrina.
Alumin. Alumina, the oxyde of Aluminium.
Alumin. met., Aluminium metallicum.
Alum. P. S., Aluminæ and Potassæ Sulphas, the common Alum.
Ambra, Ambra grisea.
Ammon. c., Ammonium carbonicum.
Ammon. mur., Ammonium muriaticum.
Ammon. phos., Ammonium phosphoricum.
Anac., Anacardium orientale.
August., Angustura vera., Galipea officinalis.
Ant. cr., Antimonium crudum.
Apis, Apis mellifica.
Apium virus, Apium virus.
Apocyn. andros., Apocynum androsemifolium.
Apocyn. cann., Apocynum cannabinum.
Aralia racemosa, Aralia racemosa.
Aranea diad., Aranea diadema.
Argent., Argentum metallicum,
Arg. nitr., Argentum nitricum.
Arn., Arnica montana.
Arsen., Arsenicum album.
Artemisia v., Artemesia vulgaris.
Arum triph., Arum triphyllum.
Asa f., Asa fœtida; Ferula A. f.
Asclepias syriaca, Asclepias syriaca.
Asclepias tuber., Asclepias tuberosa.
Aselli jecor. ol., Aselli jecoris oleum.
Askalabotes, Askalabotes lævigatus, a lizard of South America.
Asterias rubens, Asterias rubens.
Atropin., Atropinum sulphuricum.
Aurum, Aurum metallicum s. præcipitatum.
Aur. mur., Aurum muriaticum.

Badiaga, Badiaga, a Russian sponge of fresh water.
Baptisia, Baptisia tinctoria.
Baryta, Baryta carbonica.
Bar. mur., Baryta muriatica.
Bell., Atropa Belladonna.
Berberis, Berberis vulgaris.
Bismuth., Bismuthum subnitricum.
Borax, Borax veneta, natrum boracicum.
Brom., Brominum.
Bry., Bryonia alba.
Bufo, Bufo Sahyticnsis and others.

Cact. grand., Cactus grandiflorus.
Calad., Caladium seguinum.
Calc. arsen., Calcarea arsenica.
Calc. c., Calcarea carbonica.
Calc. oxal., Calcarea oxalica.
Calc. phos., Calcarea phosphorica.
Calc. urin., Calcareous deposits.
Calendula, Calendula officinalis.
Camph., Camphora.
Cann., Cannabis sativa.
Canth., Cantharides
Caps., Capsicum annuum.
Carbo an., Carbo animalis.
Carbo veg., Carbo vegetabilis.
Card. mar., Carduus marianus.
Cascarilla, Cascarilla, Croton Eluteria.
Cauloph., Caulophyllum thalictroides.
Caust., Causticum Hahnemanni.
Cepa, Allium Cepa.
Cham., Matricaria Chamomilla.
Chelid., Chelidonium majus.
Chelone, Chelone glabra.
Chimaph., Chimaphila umbellata.
China, Cinchona officinalis, regia, rubra.
Chinin. arsen., Chininum arsenicosum.
Chin. sulph., Chininum sulphuricum.
Chlorine, Chlorum in aqua.
Cicuta, Cicuta virosa.
Cimex, Cimex lectularius.
Cimicifuga, Cimicifuga racemosa.
Cina, Cina, Artemisia Santonica.
Cinnabaris, Hydrargyri sulphuretum rubrum
Cistus, Cistus canadensis.
Clematis, Clematis erecta.
Cocc., Menispermum Cocculus.
Coffea, Coffea arabica, cruda.
Colch., Colchicum autumnale.
Collinsonia, Collinsonia canadensis.
Coloc., Cucumis Colocynthis.
Con., Conium maculatum.
Convolv., Convolvulus arvensis.
Copaiva, Balsamum Copaivæ.
Corall. r., Corallium rubrum.
Cornus cir., Cornus circinata.
Crocus, Crocus sativus.
Crotalus, Crotalus horridus.
Crot. tigl., Croton Tiglium.

Corydalis, Corydalis formosa.
Cupr., Cuprum metallicum.
Cyclamen, Cyclamen Europæum.
Cypripedium, Cypripedium pubescens.

Diadema, Aranea diadema.
Digit., Digitalis purpurea.
Dioscorea, Dioscorea villosa.
Dolichos pr., Dolichos pruriens.
Drosera, Drosera rotundifolia.
Dulc., Solanum Dulcamara.

Elaps, Elaps corallinus.
Erigeron, Erigeron canadense.
Eryngium, Eryngium aquaticum.
Eupat. arom., Eupatorium aromaticum.
Eupat. perf., Eupatorium perfoliatum.
Eupat. purp., Eupatorium purpureum.
Euphorbia, Euphorbia corollata.
Euphorbium, Euphorbium officinarum.
Euphras., Euphrasia officinalis.

Ferrum, Ferrum metallicum.
Ferr. ac., Ferrum aceticum.
Ferr. carb., Ferrum carbonicum.
Ferr. jod., Ferrum jodatum.
Filix mas., Aspidium filix mas.
Fluor ac., Acidum fluoricum.
Frasera, Frasera carolinensis.

Galium, Galium verum.
Glonoine, Glonoinum, Nytroglycerine.
Gelsem., Gelseminum sempervirens.
Ginseng, Panax Ginseng.
Gnaphalium, Gnaphalium polycephalum.
Gossypium, Gossypium herbaceum.
Graph., Graphites.
Guaco, Mikania Guaco.
Guajac., Guajacum officinale.
Gutti, Gummi gutti, from Garcinia Ceylonica.

Hamam., Hamamelis virginica.
Hedeoma, Hedeoma pulegioides.
Helleb., Helleborus niger.
Helonias, Helonias dioica.
Hepar, Hepar sulphuris calcareum.
Hydrastis, Hydrastis canadensis.
Hydrophobinum, Hydrophobinum.
Hydrocyan. ac., Acidum hydrocyanicum.
Hyosc., Hyoscyamus niger.
Hypericum, Hypericum perforatum.

Ignat., Ignatia amara.
Ipec., Cephaëlis Ipecacuanha.
Iris, Iris versicolor.

Jatropha, Jatropha Curcas.
Jod., Jodium.
Juncus, Juncus effusus.

Kali bichr., Kali bichromicum.
Kali. c., Kali carbonicum.
Kali hydroj., Kali hydrojodicum.
Kalmia lat., Kalmia latifolia.
Kousso, Brayera.
Kreos., Kreosotum.

Lach., Trigonocephalus Lachesis.
Lachnanthes, Lachnanthes tinctoria.
Laurocerasus, Prunus Laurocerasus.
Led. pal., Ledum palustre.
Leptandra, Leptandra virginica.
Lobelia inflata, Lobelia inflata.
Lyc., Lycopodium clavatum.
Lycopus, Lycopus virginicus.

Magn. c., Magnesia carbonica.
Magn. mur., Magnesia muriatica.
Magn. usta, Magnesia usta.
Magnesium met., Magnesium metallicum.
Mangan., Magnanum aceticum.
Marum verum, Teucrium Marum verum.
Menyanthes, Menyanthes trifoliata.
Merc., Mercurius solubilis Hahnemanni.
Merc. bijod., Mercurius bijodatus.
Merc. jod., Mercurius jodatus.
Merc. nitrosus, Mercurius nitrosus.
Merc. præcipit. r., Mercurius præcipitatus ruber.
Merc. subl. corr., Mercurius sublimatus corrosivus.
Mezer., Daphne Mezereum.
Millef., Achillea Millefolium.
Moschus, Moschus verus.
Murex, Murex purpurea.
Mur. ac., Acidum muriaticum.
Myrica, Myrica cerifera.
Myrtus com., Myrtus communis.

Natr. c., Natrum carbonicum.
Natr. mur., Natrum muriaticum.
Natr. sulph., Natrum sulphuricum.
Nitr. ac., Acidum nitricum.
Nitrum, Kali nitricum.
Nuphar, Nuphar lutea.
Nux mosch., Nux moschata, Myristica N. m
Nux v., Nux vomica, Strychnos N. v.

Oleander, Nerium Oleander.
Opium, Opium; Papaver somniferum.

Pareira brava, Pareira brava.
Petr., Petroleum.
Petrosel., Petroselinum.
Phosph., Phosphorus.
Phos. ac., Acidum phosphoricum.
Phytol., Phytolacca decandra.
Platina, Platina.
Plumb., Plumbum aceticum.
Podoph., Podophyllum peltatum.
Prunus spin., Prunus spinosa.
Psorin., Psorinum.
Pulmo vulpis, Pulmo vulpium.
Puls., Pulsatilla pratensis.
Punica, Punica granatorum.

Ranunc. bulb., Ranunculus bulbosus.
Ranunculus scel., Ranunculus sceleratus.
Ratanhia, Ratanhia, Krameria triandra.
Rheum, Rheum australe and others.
Rhod., Rhododendron chrysanthum.
Rhus tox., Rhus Toxicodendron.
Rumex, Rumex crispus.
Ruta, Ruta graveolens.

Sabad., Veratrum Sabadilla.
Sabina, Juniperus Sabina.
Sambucus, Sambucus nigra.
Sanguin., Sanguinaria canadensis.
Sapo sodæ, Sapo sodæ.

Sarracenia, Sarracenia purpurea.
Sarsap., Sarsap., Smilax Sarsaparilla.
Scilla, Scilla maritima.
Secale, Secale cornutum.
Selen., Selenium.
Senecio, Senecio gracilis.
Senega, Polygala Senega.
Sepia, Sepia officinalis, Atramentum, Sepiæ.
Silic., Silicea.
Silphium, Silphium laciniatum.
Spigelia, Spigelia anthelmintica.
Spongia, Spongia tosta.
Squilla, Scilla maritima.
Stannum, Stannum metallicum.
Staphis., Delphinium Staphisagria.
Sticta, Sticta pulmonaria.
Stillingia, Stillingia sylvatica.
Stram., Datura Stramonium.
Sulph., Sulphur.
Sulph. ac., Acidum sulphuricum.
Symphytum, Symphytum officinale.

Tabac., Nicotiana Tabacum.
Tarax., Leontodon Taraxacum.
Tart. em., Tartarus emeticus.
Tellur., Tellurium metallicum.
Terebinthina, Oleum terebinthinæ.
Teucrium, Teucrium Marum verum.
Thea, Thea viridis.
Thlaspi b. past., Thlaspi Bursa pastoris
Thuya, Thuya occidentalis.
Trillium, Trillium pendulum.
Tussilago, Tussilago Petasites.

Urtica ur., Urtica urens.
Uva ursi, Arbutus Uva ursi.

Vaccininum, Vaccininum.
Valeriana, Valeriana officinalis.
Variolinum, Variolinum.
Veratr., Veratrum album.
Verat. vir., Veratrum viride.
Verbasc., Verbascum Thapsus.
Verbena Jam., Verbena Jamaicaensis.
Viola tri., Viola tricolor, Jacea.

Zincum, Zincum metallicum.
Zinc. sulphuricum, Zincum sulphuricum.
Zizia, Zizia aurea.

INDEX.

Abdomen 229
Abdomen, general observations..... 229
Abnormal largeness of the head 27
Abnormal motions of the head..... 25
Abnormal smallness of the head..... 29
Abortive typhoid fever..... 576
Abscess of the ankle-joint..... 483
Abscess in the brain..... 12
Abscess of the cornea..... 46
Abscesses in the liver..... 322
Abscess of the psoas-muscle..... 263
Abscesses of the spleen 347
Acarus scabiei..... 624
Achorion Schönleini 121
Achroma..... 608
Acne punctata..... .....66, 77
Acne rosacea.....66, 77
Acne syphilitica..... 394
Acute yellow atrophy of the liver..... 327
Acute tumor of the spleen.....348
Aegidy..... 484
Ægophony..... 158
Affections of the bronchial tubes..... 161
Affections of the skull without enlargement 29
Ague..... 551
Akinesis.....501, 524
Albuminous degeneration of the liver... 329
Albuminuria 362
Alcohol destroys the mould..... 122
Alopecia..... 37
Alopecia senilis..... 608
Amaurosis..... 48
Amenorrhœa..... 437
Analogy between the ear and the eye... 54
Anæmia 533
Anæmia of the brain..... 1
Anæmia of the skin 608, 609
Anæmia of the spine..... 450
Anæmic murmurs..... 210
Anæsthesia. 499
Anæsthesia of the trigeminus..... 500
Anchilops..... 40
Aneurysma, acute, of the heart..... 216
Aneurysm of the aorta..... 227
Aneurysms of the brain..... 22
Angina faucium..... 109
Angina granulosa or follicularis..... 109
Angina maligna..... 595
Angina parotidea..... 106
Angina pectoris..... 226
Anidrosis 629
Animal parasites in the brain..... 22
Animal parasites within the spinal marrow..... 460
Animalcules in comedones..... 66
Ankle-joint, abscess of the..... 483
Anomalies in the secretions of the skin. 627
Anteversion of the womb..... 423
Aorta, aneurysm of the..... 227
Aorta, diseases of the..... 227
Aortic opening, constriction of the..... 220
Aortic valves, defective 220
Aphthæ..... 113
Aponeurotic dropsy of the scalp..... 27
Apoplexy, pulmonary..... 191
Apoplexia sanguinea..... 15
Apoplexia serosa..... 11
Apoplectic cyst..... 16
Apoplexy of the spine. 451
Arachnitis..... 12
Arthritis..... 470
Arthritis deformans, nodosa or pauperum..... 463
Ascaris lumbricoides..... 305
Ascites. 314
Asthma..... 167
Asthma bronchiale nervosum..... 167
Asthma humidum 168
Asthma laryngeum infantum..... 130
Asthma Millari 130
Asthma periodicum acutum infantile... 130
Asthma spasmodicum 130
Asthma thymicum Koppii 130
Atheromata ..... 6[illegible]
Atrophy, acute yellow, of liver 327
Atrophy of the brain 20
Atrophy of the skin..... 608
Atrophy of the skull..... 30
Atrophy of the spinal cord..... 459
Auricles, cold..... 56
Auricle, erysipelas of the..... 59
Auricles, flushes of the..... 56
Auricles, hot..... 56
Auricles, paleness of..... 56
Auricles, purplish spots of the..... 56
Auricles, redness of the. 56
Auricles, swollen..... 56
Auriculo-ventricular opening, constriction of the left..... 219
Auscultation 148
Auscultation of the brain..... 1
Auscultation of cough..... 160
Auscultation of larynx..... 129
Auscultation of voice..... 156

Balanitis..... 392
Baldness 37, 608
Bamberger..... 325
Barclay.....35, 138

Basilar meningitis 8
Beating with one arm and one leg up and down 25
Bednar 113
Bed-sores in typhus 578
Bending the head backwards 25
Biliary ducts, diseases of the 334
Black-vomit 565
Bladder, diseases of the 368
Bleeders 543
Blepharitis 39
Blepharo-plegia 54
Blepharo-spasmus 52
Blisters, isolated, forming thick crusts .. 618
Blisters, large, isolated 617
Bloatedness 293
Blood 529
Blood-spitting 191
Bock 190
Boil 618
Boenninghausen 72
Bones, softening of the 474
Bony protuberances of the skull 28
Bony tumors within the skull 21
Boring the head into the cushion 25
Bothriocephalus latus 306
Brain diseases, diagnosis of, often impossible 27
Brain and its membranes, diseases of the 1
Brain symptoms 26
Breathing, irregular and sighing, as a brain symptom 26
Bright's disease, acute 360
Bright's disease, chronic 362
Bronchiectasia 161
Bronchial respiration 148, 151
Bronchitis 161
Bronchitis capillaris 162
Bronchophony 157
Broncho-typhus 577
Bruised head of a child after birth 28
Bryan 60, 58
Bubo 382
Bubo, inguinal 390
Bullæ, large, isolated 617
Burdach 84

Calculi vesicæ 372
Callosities 607
Callosity of the edges of the eyelids 46
Calvities 608
Calor mordax 539
Camp-fever 569
Cancer of the breast 448
Cancer of the cæcum 264
Cancer of the eye 51
Cancer, flat, of the face 78
Cancer of the intestines 303
Cancer of the liver 330
Cancer of the lower lip 78
Cancer of the pancreas 352
Cancer of the rectum 303
Cancer of the spleen 349
Cancer of the stomach 247
Cancer of the tongue 104
Cancer of the womb 428
Cancerous tumors in the brain 21
Cankers of the mouth 113
Canstatt 544
Caput medusæ 231
Caput succedaneum 28
Carbuncle 619
Carbunculus 619
Carbunculus oris 124
Carcinoma hepatis 330
Carcinoma mammæ 448
Carcinoma testis 403
Carcinoma ventriculi 247
Cardialgia 241
Carditis 222
Caries 475
Caries of the skull 30
Castrates 37
Catalepsy 511
Cataracta lentis and capsulæ 47
Catarrh of the bladder 368
Catarrh of the bronchi 161
Catarrh on the chest of infants 162
Catarrh of the gall-ducts 334
Catarrh of the intestinal canal 256
Catarrh of the mucous membrane of the larynx and trachea 131
Catarrh of the nose 68
Catarrh of the rectum 265
Catarrh, acute, of stomach 236
Catarrh, chronic, of stomach 239
Catarrh of the uterus 415
Catarrh of the vagina 444
Catarrhal pneumonia 173
Catarrhus intestinalis 256
Cauliflower excrescences of the womb .. 428
Cavernous voice 160
Cellular dropsy of the scalp 27
Celsius' thermometer 547
Cephalalgia 487
Cephalalgia rheumatica 464
Cervico-occipital neuralgia 495
Cervico-brachial neuralgia 495
Cessation of menses 437
Chalazion 46
Chancre 384
Chancre, constitutional 384
Chancre, indurated 387
Chancre, local 384
Chattering of the teeth 79
Chemosis 41
Chicken-pox 605
Chiragra 472
Chirarthrocace 484
Chloasmata uterina 607
Chlorosis 533
Cholæmia 538
Cholera 273
Cholera infantum 280
Cholera morbus 279
Cholerine 275
Chorea 504
Chronic tumor of the spleen 348
Chronic intestinal catarrh 259
Cirrhosis 324
Cirsocele 403
Clavi 607
Click sound 156
Clonic spasms 24
Closure of the womb 423
Coagulum in the portal veins 336
Coating of the tongue 101
Cock's gait 26
Cold in the head 68
Cold, yearly 69

Colelithiasis 334
Colic 295
Colica flatulenta 297
Colica renalis 365
Colica rheumatica 297
Colica saburralis 297
Collapsus of the brain 29
Colloid liver 329
Colloid spleen 349
Color of the tongue 100
Coma 23
Comedones 66, 77, 629
Complications of gonorrhœa 382
Condylomata 389, 608
Congestion of the brain 4
Congestion of the liver 318
Congestion of the skin 608
Congestive fever 562, 564
Conjunctivitis 41
Consistency of the tongue 102
Constipation 283
Constitutional chancre 385, 387
Constitutional syphilis 385
Constitutional syphilis, hints to 398
Constipation of the bowels, a brain-symptom 26
Constriction of the aortic opening 220
Constriction of the left auriculo-ventricular opening 219
Constriction of pulmonary opening 221
Constriction of right auriculo-ventricular opening 221
Consumption of bodily substance 549
Consumption of the bowels 302
Continued fever 563
Continuous malarial fever 562
Contraction of muscles and tendons, syphilitic 396
Convulsion 24, 501
Convulsions of children 520
Copper-colic 298
Cor hirsutum 212
Cor villosum 212
Corns 607
Cornua humana 36
Cornua cutanea 607
Corpus striatum, frequent seat of hemorrhages in the brain 16
Coryza 68
Coxalgia 478
Coxarthrocace 478
Cracked-pot sound 147
Cracks on the tongue 103
Cramp 501
Cramp of the stomach 241
Craniotabes 29
Cranium, its integuments 30
Crepitant rattle 152
Crisis 549
Critical days 549
Crural neuralgia 499
Crusta lactea 76, 614
Crusta serpiginosa 614
Croup 133
Croupous nephritis 595
Croupous pneumonia 173
Curling 257
Cutis anserina 553
Cyanosis 530
Cyanosis 608
Cysticercus cellulosa 22, 306
Cystitis 368
Cystitis parenchymatosa 372
Cystitis serosa 372
Cysts in the brain 21
Cysts, formation of, in the ovaries 412

Dacryo-cystitis 40
Dandruff 33, 613
Davies 153
Deafness 62
Decubitus 609
Decubitus in typhus 578
Defective aortic valves 220
Defective valves of pulmonary artery 221
Defective tricuspid valves 221
Deficiencies of the brain 20
Deforming inflammation of the joints 463
Deformities of the nails 394
Degeneration of the coatings of the arteries in the brain 15
Delirium 22
Dermatitis 609
Dermo-cystoides 36
Diagnosis of brain diseases often impossible 1, 27
Diagnosis of ear diseases 57, 58
Diarrhœa 257, 258
Diabetes mellitus and insipidus 356
Diabetes mellitus is associated with a diminution of gaseous secretions of the skin 628
Diaphragm, perforation of 229
Diaphragm, rupture of 229
Diaphragmitis 228
Diastole 204
Dilatation of the heart 223
Diphtheria 114
Diphtheritis 114
Diplosporium fuscum 121
Discharges from the ears 56, 60
Diseases of the biliary ducts 334
Diseases of the cranium and its membranes 27
Diseases of the hepatic parenchyma 318
Diseases of the integuments of the skull 30
Diseases of the kidneys 352
Diseases of the prostata 404
Diseases of the respiratory organs 160
Diseases, spasmodic 503
Diseases of the testes 401
Diseases, venereal 377
Diseases of the vesiculæ seminales 407
Dissolution of the red blood-corpuscles. 531
Displacement of the womb 423
Dolor faciei Fothergillii 491
Dribbling of urine 376
Dropsical effusions within the brain 7
Dropsy of the appendix 262
Dropsy of the bowels 314
Dropsy of the chest 200
Dropsy, ovarian 412
Dropsy of the pericardium 215
Dropsy of the peritoneum 314
Dropsy of the scalp 27
Dropsy of the spine 452
Drowsiness 23
Drum-sound 144
Dry pleurisy 193
Dry sounds 152

Duration of pneumonia..... 173
Dysentery..... 267
Dysmenorrhœa..... 440
Dyspepsia..... 233
Dysphagia inflammatoria..... 127
Dysuria..... 376

Ears..... 54
Ears, bleeding from the..... 56
Ears, discharges from the..... 57
Ear, general observations on the..... 56
Ears, inflammation of the..... 57
Ears, best means and modes of exploring the..... 57
Ear-speculum..... 57
Ear-wax, thin..... 57
Eclampsia acuta..... 518
Echinococcus hominis..... 22
Echinococcus-cysts of the liver..... 332
Echinococcus-cysts of the spleen..... 350
Eclampsia gravidarum et parturientium 519
Eclampsia infantum..... 520
Ecthema..... 616
Ecthema capitis..... 34
Eczema..... 613
Eczema capitis..... 34
Eczema impetiginosum..... 614
Eczema marginatum..... 614
Eczema rubrum..... 614
Eczema of the scalp..... 37
Eidherr..... 176, 177
Emboli..... 217, 347
Emphoric echo..... 160
Emphysema pulmonum..... 186
Emprosthotonus..... 509
Empyema..... 197
Encephalitis..... 12
Encephalomalacia..... 18
Encysted tumors on the eyelids..... 50
Endarteriitis deformans..... 15
Endocarditis..... 216
Enlargement of the spleen..... 348
Enlargement of the prostata..... 405
Enlargement, chronic, of the tonsils.... 108
Enteralgia..... 295
Enteric fever..... 572
Enteritis..... 256, 257
Entero-mesenteric fever..... 572
Entozoës..... 304
Ephelides..... 607
Epilepsy..... 24, 512
Epistaxis..... 70
Epulis..... 83
Eruptions, syphilitic..... 78
Erysipelas of the auricle..... 59
Erysipelas bullosum..... 31
Erysipelas of the face..... 76
Erysipelas of the scalp..... 30
Erysipelatous meningitis..... 31
Erythema..... 609
Erythema nodosum..... 609
Erythema papulatum..... 609
Erythema tuberculosum..... 609
Eunuchs..... 37
Eustachian tube..... 57, 58
Eustachian tube, stoppage or stricture of the..... 62
Exanthemata..... 587
Exostosis..... 475
Exostosis of the skull..... 28

Expiratory murmur..... 150, 151
Expiratory sound..... 148
Eyelids, inflammation of the..... 39
Eyes, appearance of the..... 38
Eyes, brilliancy of the..... 38
Eye-corner, inflammation of the inner.. 40
Eyes, diseases of the..... 39
Eyes, dull..... 38
Eye, fœtal development of the..... 38
Eyes, glassy..... 38
Eyes, inflammation of the..... 39
Eyes, sunken..... 38
Eyes, unnatural lustre of the..... 38

Face..... 72
Face, its aspect..... 72
Face, blue color of the..... 75
Face, brown spots of the..... 75
Face, its color..... 74
Face, its expression..... 74
Face, livid..... 75
Face, neuralgia of the..... 79
Face, paleness of the..... 74, 75
Face, redness of the..... 74
Face, showing cerebral symptoms..... 26
Face, spasmodic and paralytic affections of the..... 79
Face, special diseases of the..... 76
Face, swelled..... 99
Face, its temperature..... 76
Face, yellow color of the..... 75
Falling of the palate..... 109
Falling of the womb..... 424
Falling out of the hair..... 394
Fatty degeneration of the heart..... 224
Fatty liver..... 328
Fauces..... 109
Favus..... 35, 121
Febris intermittens..... 551
Febris intermittens algida..... 563, 564
Febris intermittens comatosa..... 563
Febris intermittens subintrans..... 562, 563
Febris nervosa stupida..... 575
Febris nervosa versatilis..... 575
Felon..... 620
Female organs..... 409
Fever..... 547
Fever and ague..... 551
Fever-blisters..... 77, 610
Figwarts..... 389, 608
First sound of the heart..... 204
Fish-skin..... 607
Fissures on the tongue..... 103
Fistulæ ani..... 267
Fistula dentalis..... 83
Fistula thoracica..... 197
Flatulency..... 293
Flores sulphuris..... 275
Fontanelles..... 29
Form and size of the tongue..... 102
Form of the thorax..... 140
Freckles..... 607
Fremitus..... 140
Friction sound..... 156
Frog..... 107
Full of sleep and yet unable to sleep... 24
Fungoid growth on the gums..... 83
Fungus carunculæ lachrymalis..... 51
Fungus conjunctivæ..... 51
Fungus of the eye..... 51

Fungus hæmatodes of the eye 51
Fungus medullaris of the eye 51
Fungus medullaris bulbi 51
Fungus oculi 51
Furuncles of the ear 59
Furunculus 618

Gall-ducts, catarrh of the 334
Gall-stones 334
Gangræna oris 124
Gangræna pulmonum 190
Garotilla 114
Gaseous secretions of the skin 627
Gastralgia 241
Gastric fever 576
Gastritis 236
Gastritis caustica 240
Gastritis toxica 240
Gastromalacia 255
Glaucoma 48
Gleet 379
Glossitis 104
Gnashing of teeth 79
Goat-bleating 159, 160
Goitre 126
Golden vein 288
Gonagra 472
Gonarrthrocace 479
Gonorrhœa 377
Gonorrhœa præputialis 392
Gonorrhœa of the rectum 383
Gonorrhœa spuria 392
Gonorrhœa vesicæ 382
Gonorrhœal contamination of the system 383
Gout 470
Gout, anomalous 472
Gout of the stomach, brain or heart 472
Grating-feel 142
Granular phthisis 184
Grauvogl 550
Grauvogl on diphtheria 121
Grippe 162
Gross 479, 482
Gross, Wm 506
Grubs 66
Gum-boil 82, 83
Gummata in the cellular tissue 396
Gums 82
Gums, bleeding of the 82
Gums, fungoid growth on the 83
Gums, inflammatory swelling of the 82, 83
Gums, lancing the 84
Gums, swollen 82
Gums, ulcerated 82

Habitus apoplecticus 15
Hæmatemesis 252
Hæmaturia 357
Hæmometra 423
Hæmophilia 543
Hæmoptoë 191
Hæmoptoic infarct 191
Hæmoptysis 190
Hæmo-pneumothorax 199
Hæmorrhagia intestinalis 286
Hæmorrhagic softening of the brain 18
Hæmothorax 203
Hahnemann 276
Hair, changing its color 37
Hair, cutting of the 37
Hair, falling off of the 37
Hair, false in the eyelashes 43
Hair, matted 37
Hallier 121
Hammond 23
Hardening of the brain 18
Hardening of the spinal marrow 458
Hasse 22, 486
Heart 203
Heart, how it works 203
Heart-muscle 222
Heart, its situation 205
Hebra's notions about the curing of eczema and impetigo 616
Helminthes 304
Hemiplegia 525
Hemorrhage from bladder 358
Hemorrhage from the bowels in typhus 577
Hemorrhage from kidneys 358
Hemorrhage from the lungs 191
Hemorrhage from the nose in typhus 577
Hemorrhage from the stomach 252
Hemorrhage from ureters 358
Hemorrhage from urethra 358
Hemorrhage from the womb 431
Hemorrhage from the womb in typhus 577
Hemorrhoids 287
Hepar Adiposum 328
Hepatitis 321
Hepatitis parenchymatosa s. suppurativa 321
Hering 137, 275
Hering's Domestic Physician 85
Herpes 610
Herpes circinnatus 612
Herpes facialis 610
Herpes Iris 612
Herpes labialis 77, 610
Herpes phlyctænodes 610
Herpes præputialis 610
Herpes Zoster 611
Hiccough 229
Hip-disease 478
Hippocrates 549
Hippocratic face 73
Hob-nail liver 324
Holcombe 566
Honey-comb ringworm 35
Hooping-cough 165
Horns 607
Hughes 130, 138, 139, 143, 155
Human horns 36
Humectation of the tongue 101
Humid tetter of the scalp 34
Humming of voice 157
Hunter's chancre 387
Hydatids of the liver 332
Hydræmia 532
Hydroa febrilis 77, 610
Hydrocele 401
Hydrocephalitic softening of the brain 18
Hydrocephaloid 280
Hydrocephaloid of Marshall Hall 3
Hydrocephalus acutus 7
Hydrocephalus chronicus 9
Hydrocephalus congenitus 10
Hydrocephalus ex vacuo 11
Hydrocephalus senilis 11, 20
Hydrometra 423
Hydropericardium 215

Hydropneumothorax 199
Hydrops ovarii 412
Hydrops pulmonum 189
Hydrorrhachis 452
Hydrothorax 200
Hyperæmia 318
Hyperæmia of the brain 4
Hyperæmia of the skin 608
Hyperæmia of the spine 450
Hyperæmia of the spleen 348
Hyperæsthesia 484
Hyperidrosis 628
Hyperkinesis 501
Hypertrophy of the brain 19
Hypertrophy of the heart 223
Hypertrophy of the pancreas 352
Hypertrophy of the skin 607
Hypertrophy of the skull 28
Hypertrophy of the spinal cord 459
Hypertrophy of the spleen 348
Hypertrophy, eccentric, of left ventricle 220
Hypopyon 43, 46

Ichthyosis 607
Icterus 337
Icterus, from mental emotions 341
Icterus neonatorum 340
Icterus of pregnant females 340
Ileo-typhus 572
Ileus 282
Immobility of the tongue 103
Impaired hearing 62
Impetigo 615
Impetigo capitis 34
Impetigo erysipelatodes 616
Impetigo figurata 616
Impetigo sparsa 616
Impotence 408
Inability to hold up the head 11
Indigestion 233
Indurated chancre 387
Infant's sore mouth 112
Infarct, hæmoptoic 191
Infarct of the womb 419
Inflammation of the bladder 368
Inflammation of the bowels 257
Inflammation, catarrhal, of the eyes .. 41, 43
Inflammation, catarrhal, of the gall-ducts 334
Inflammation, catarrhal, of the renal pelvis 366
Inflammation of the diaphragm 228
Inflammation of the endocardium 216
Inflammation of the eyes 39
Inflammation, gonorrhœal, of the eyes. 44, 45
Inflammation of the heart-muscle 222
Inflammation of the inner eye-corner ... 40
Inflammation, interstitial, of kidneys ... 364
Inflammation, interstitial, of the liver .. 324
Inflammation of the liver 321
Inflammation of the mammæ 446
Inflammation of the ovaries 409
Inflammation of the pancreas 351
Inflammation of the parotids 106
Inflammation of the pericardium 212
Inflammation of the pleura 193
Inflammation of the portal veins 336
Inflammation of the prostata 404
Inflammation of the renal capsule 367
Inflammation, scrofulous, of the eyes ... 43
Inflammation, specific and dyscratic, of the eyes 39
Inflammation of the skin 609
Inflammation of the spinal marrow 456
Inflammation of the spleen 346
Inflammation of the substance of the brain 12
Inflammation of stomach in consequence of poison 240
Inflammation, syphilitic, of the eyes .. 44, 45
Inflammation, syphilitic, of the liver ... 326
Inflammation of the tear-bag 40
Inflammation of the testicles 402
Inflammation of the tongue 104
Inflammation of the tonsils 107
Inflammation of the tympanum 57
Inflammation of the vermiform process 262
Inflammatory affections of the brain and its membranes without effusion 12
Influenza 162
Inner canthi of the eyes injected 25
Insomnia 23
Inspection of thorax 137
Inspiratory sound 148
Insufficiency of the mitral valves 213
Integuments of the cranium 30
Integuments of the skull, diseases of the 30
Intercostal neuralgia 495
Intermittens completa 553
Intermittens duplicata 554
Intermittens incompleta 553
Intermittens inversa 553
Intermittens perniciosa 562
Intermittens septiana 554
Intermittens subintrans 554
Intermittent fever 551
Intertrigo 609
Intertrigo auriculæ 59
Intestinal catarrh 256
Intestinal hemorrhage 286
Intestinal obstruction 281
Intussusception 264
Invagination 264
Involuntary discharge of urine 376
Iritis syphilitica 395
Ischias antica 499
Ischias postica 496
Itch 624

Jackson 151, 181
Jaundice 337
Jaundice, from vexation, &c 341
Jail-fever 569
Jerking expiration 151

Kafka 177
Kidneys, diseases of the 352
Kidneys, inflammation of the 364
Knee, white swelling of the 479

Labyrinth 58
Lænnec 150, 153
Laryngeal respiration 129
Laryngismus stridulus 130
Laryngitis stridulosa 130
Laryngophony 156, 157
Laryngo-tracheitis 131
Larynx 129
Lead-colic 298
Lental cataract 47

Lentigines 607
Leucorrhœa 415
Leukæmia 532
Lichen 623
Lichen agrius 624
Lichen simplex 623
Lichen syphiliticus 393
Lienitis 346
Lifting the feet peculiarly when walking 26
Lifting the head from the pillow 25
Linea labialis 73
Linea nasalis 73
Linea ophthalmia zygomatica 73
Lippe 405
Lips 81
Liver 318
Liver, acute, yellow atrophy 327
Liver, cancer of the 330
Liver, colloid, waxy, albuminous degeneration of the 329
Liver, fatty degeneration of the 328
Liver, granulated 324
Liver, hob-nail 324
Liver, hydatids of the 332
Liver, interstitial inflammation of the 324
Liver, scrofulous 329
Liver-spots 607
Liver, syphilitic inflammation of the 326
Lockjaw 79
Lumbago rheumatica 465
Lumbo-abdominal neuralgia 496
Lung-sound 146
Lungs, œdema of the 189
Lupus 67, 77
Lupus syphiliticus 394
Lupus vorax 67

Malaria 552
Malæna 286
Male genitals 377
Malignant bilious fever 564
Malum Cotunnii 496
Mammæ 446
Manual examination of the thorax 139
Marasmus senilis 20
Marisci 288
Marshall Hall 280
Mastitis 446
Mastodynia 496
Mastoid process 57
Measles 587
Membrana tympani 58
Membrana tympani, ulceration, thickening, and destruction of the 60
Meningitis basilaris 8
Meningitis cerebro-spinalis epidemica 13
Meningitis spinalis 454
Meningitis tuberculosa 7
Menorrhagia 435
Menstrual anomalies 435
Menstruatio difficilis 440
Metallic, ringing, percussion sound 147
Metallic tinkling 160
Meteorism 293
Metritis, puerperalis 420
Metrorrhagia 431
Miasma 552
Microscopic fungi 121
Micturition 375
Middle ear, inflammation of the 59
Migræna 487
Miliaria alba 628
Miliaria rubra 628
Miliary rash 628
Miliary tubercles in the brain 21
Miliary tuberculosis 184
Milium 629
Milk crust 76
Milk-leg 420
Mimic spasm 79, 503
Miserere 282
Mitral valves, insufficiency of 218
Mogigraphia 504
Moist sounds 153
Moles 607
Molluscum simplex 608
Morbid sounds of the heart 207
Morbilli 587
Morbilli asthenici 589
Morbilli confluentes 587
Morbilli erethici 588
Morbilli inflammatorii 589
Morbilli nervosi 589
Morbilli petechiales 587
Morbilli septici 589
Morbilli simplices 588
Morbilli sine exanthemate 588
Morbilli synochales 589
Morbilli torpidi 589
Morbilli vulgares 588
Morbus maculosus Werlhofii 542
Morbus sacer 512
Mother's marks 36, 607
Motions of thorax 140
Motory apparatus 461
Motory nerves 501
Motory nerves of the eyes, affection of the 52
Mould, common, of bread 122
Mouth 81
Mouth, interior cavity of the 82
Mouth, open 82
Mouth, spasmodically closed 82
Mucous rattle 154
Mumps 106
Murmur of expiration 150
Muscular rheumatism 464
Myelitis 456
Myelomalacia 458
Myocarditis 222

Nævi spili 607
Nævus vascular 36
Nails, deformity of the 394
Nasal cavity, diseases of the 68
Nasal twang 158
Neck 125
Necrosis 475
Necrosis of the skull 30
Necrotic softening of the brain 18
Nephralgia 365
Nephritis crouposa 360
Nephritis parenchymatosa 362
Nephritis vera, suppurativa 364
Nerves 484
Nervous affections of the heart 225
Nervous colic 297
Nervous fever 572, 576
Nervousness 484
Nettle-rash 612

Neuralgia 485
Neuralgia, cervico-occipital 495
Neuralgia, cervico-brachial 495
Neuralgia cruralis 499
Neuralgia of the face 79, 491
Neuralgia facialis 79, 491
Neuralgia, intercostal 495
Neuralgia ischiadica 496
Neuralgia, lumbo-abdominal 495
Neuralgia of the mammæ 486
Neuralgia of the trigeminus 491
Nictitatio morbosa 52
Niemeyer 168, 181, 201, 273
Noma 124
Non-tympanitic sound 146
Normal sounds of respiration 148
Nosebleed 70
Nose, color of the 65
Nose, external, diseased condition of the 66
Nose, form and shape of the 64
Nose, general observations 64
Nose, picking and boring at the 66
Nose, stuffed, of infants 70
Nose, temperature of the 65
Number of respirations 137
Numbness 485
Nunez's observations on suppressed cutaneous eruptions 606
Nun's murmur 211
Nusser's observations on the treatment of tuberculosis 181
Nutmeg-liver 320, 325

Objective cerebral symptoms 22
Obstruction, intestinal 281
Ocular examination of thorax 137
Odontalgia 84
Œdema, acute, of the lungs 173
Œdema glottidis 135
Œdema pulmonum 189
Œsophagitis 127
Œsophagus 127
Olecranarthrocace 484
Oligæmia 533
Omagra 472
Omarthrocace 484
Omodynia rheumatica 465
Onyx 46
Oophoritis 409
Ophthalmia catarrhalis 41
Ophthalmia gonorrhoica 44, 45, 382
Ophthalmia neonatorum 42
Ophthalmia scrofulosa 42
Ophthalmia syphilitica 44, 45
Ophthalmo-blennorrhœa 41
Ophthalmo-plegia 54
Ophthalmo-spasmus 52
Opisthotonus 509
Orchitis 402
Orthotonus 509
Oscillations in normal life 550
Ossicula auditus, destruction and discharge of the 62
Osteitis 475
Osteomalacia 474
Ostitis of the skull 30
Otitis interna 59
Otitis simulating hydrocephalus 60
Otorrhœa 60
Ovaries 409
Ovaries, formation of cysts in the 412
Oxyuris vermicularis 304
Ozæna 70

Pachymeningitis 12
Palpation of the thorax 139
Palpitation, nervous, of the heart 225
Panaritium 620
Pancreas, cancer of the 352
Pancreas, diseases of the 350
Pancreas, hypertrophy of the 352
Pancreatitis 351
Pannus 50
Paralysis 25, 524
Paralysis agitans 523
Paralysis of the eyeball 54
Paralysis of the eyelids 25, 54
Paralysis of the face 79
Paralysis of the tongue 103
Paraphimosis 378
Paraplegia 525
Parasite, sponge-like 112
Parenchyma of the liver 318
Parenchymatous metritis 419
Paresis 525
Paronychia 620
Parotitis 106
Partial atrophy of the brain 20
Parulis 82, 83
Pearl-tumors in the brain 21
Pectoriloquy 158
Pemphigus 617
Pemphigus foliaceus 617
Pemphigus neonatorum 397
Pemphigus syphiliticus 394
Penicillium glaucum 122
Percussion 143
Percussion sounds 144
Perforation of the intestines 577
Pericardial murmurs 211
Pericarditis 212
Pericystitis 372
Perihepatitis 321
Perinephritis 367
Periproctitis 266
Peritonitis 310
Perityphlitis 262
Periodical fluctuations 550
Permeability of the Eustachian tube ... 58
Pernicious intermittent 562
Perspiration 628
Pertussis 165
Petechial typhus 569
Pharyngitis 127
Pharynx 127
Phlegmasia alba dolens 420
Phimosis 378
Phthisis 179
Piles 287
Pimples upon the nose 66
Pithiness 485
Pityriasis 607
Pityriasis capitis 33
Pityriasis palmaris et plantaris 614
Plethora 532
Plethoric habit 16
Pleurisy 193
Pleuritis 193
Pleuritis, with abundant exudation .. 193, 195
Pleuritis, with purulent exudation .. 194, 197

Pleuritis, with scanty exudation....193, 195
Pleuritis sicca..... 193
Pleurodynia rheumatica..... 465
Pleurothotonus..... 509
Plica polonica..... 37
Pneumonia..... 173
Pneumonia notha..... 162
Pneumorrhagia..... 191
Pneumothorax..... 199
Pneumo-typhus..... 577
Podagra.....470, 472
Podarthrocace..... 483
Polypi of the nose..... 70
Polypi of the skin..... 608
Polypi of the womb..... 428
Polypus auris..... 62
Pompholyx..... 617
Porrigo capitis..... 34
Porrigo decalvans..... 35
Porrigo larvalis..... 614
Portal veins, inflammation of the..... 336
Potts's disease..... 484
Practical conclusions relating to critical days..... 551
Preacher's sore throat..... 110
Prickly heat..... 623
Procidentia uteri..... 424
Products resulting from inflammation of the ear..... 60
Proctitis..... 265
Prolapsus bulbi..... 54
Prolapsus uteri..... 424
Prosopalgia.....79, 491
Prostata, diseases of the..... 404
Prostata, enlargement of the..... 405
Prostata, inflammation of the..... 404
Prostata, tumors of the..... 405
Prostatitis..... 404
Prostatitis gonorrhoica..... 382
Prurigo..... 624
Prurigo formicans..... 624
Prurigo mitis..... 624
Prurigo pudendorum..... 624
Pruritus..... 624
Pruritus vulvæ..... 444
Pseudo-formations within the brain..... 21
Pseudo-formations of the ear..... 62
Pseudo-formations in the eyes..... 50
Psora theory.....606, 626
Psoriasis..... 622
Psoriasis annulata..... 623
Psoriasis diffusa..... 623
Psoriasis guttata..... 623
Psoriasis inveterata..... 623
Psoriasis palmaris et plantaris.....614, 623
Psoriasis syphilitica..... 394
Pterigium..... 50
Ptosis..... 25
Ptyalism..... 105
Puerile respiration..... 149
Puerperal convulsions..... 519
Puerperal metritis..... 420
Pulmonic circulation..... 204
Pulsation of the heart..... 142
Pulse in cerebral affections..... 26
Pulse and temperature..... 548
Pupils contracted..... 25
Pupils enlarged..... 25
Purpura..... 542
Purring-feel..... 142
Pustular eruption..... 615
Pustules, large, isolated..... 616
Pyæmia..... 539
Pyelitis..... 366
Pylephlebitis..... 336
Pyo-pneumothorax..... 199
Pyothorax..... 197

Quotidian fever..... 554
Quartan fever..... 554
Quinsy..... 107

Ranula..... 107
Rattle, mucous..... 154
Rattle, subcrepitant..... 154
Rattling noises..... 152
Reaching with the hand to the head..... 25
Red softening of the brain.....15, 18
Red blood-corpuscles, dissolution of the 531
Redness, a peculiar bright, of the palms of the hands in meningitis..... 26
Reeling..... 26
Remittent fever.....562, 563
Renal capsule, inflammation of the..... 367
Resistance of thorax..... 140
Respiration..... 137
Respiration and pulsation of the heart synchronous..... 137
Respiratory motion of the chest..... 137
Respiratory murmur..... 149
Retention of urine..... 377
Retro-pharyngeal abscess..... 111
Retroversion of the womb..... 423
Rhachitis..... 473
Rheumatismus..... 461
Rheumatism, chronic, of the joints..... 462
Rheumatismus, gonorrhœal..... 383
Rheumatism of the joints..... 461
Rhonchi..... 152
Rhonchi sibilantes..... 153
Rhonchus crepitans..... 152
Rhonchus-vibration..... 141
Rhypia..... 618
Richter..... 58
Rickets..... 473
Ringworm.....612, 623
Risus sardonicus..... 73
Rokitansky.....245, 572
Rolling of the head..... 25
Romberg.....168, 500
Rose cold..... 69
Roseola febrilis..... 601
Roseola syphilitica..... 393
Round, perforating ulcer of the stomach 244
Round worm..... 305
Rubbing-feel..... 142
Rubeola..... 601
Rubeola morbillosa..... 601
Rubeolæ nigræ..... 587
Rubeola scarlatinosa..... 601
Run-around..... 620
Rupia..... 618
Rupia syphilitica..... 394
Rupture of the spleen..... 350
Rush of blood to the head..... 5

Sago-spleen..... 349
Saliva..... 105
Salivary ducts..... 105
Salivary glands..... 105

Salivation 105
Salt-rheum 613, 614
Sarcocele syphilitica 396
Sarcomatous tumors in the brain 21
Sarcoptes hominis 624
Scabies 624
Scabies papulosa 626
Scabies pustulosa 626
Scabies vesiculosa 626
Scall 34
Scalp, erysipelas of the 30
Scarlatina 592
Scarlatinal dropsy 595
Scarlatina maligna, typhosa 594
Scarlatina sine angina 594
Scarlatina sine exanthemate 594
Scarlet fever 592
Scarpa 55
Sclerosis 18
Screaming out in sleep 24
Sciatica 496
Scirrhus of the eye 51
Scirrhus mammæ 448
Scirrhus ventriculi 247
Sclerosis medullæ spinalis 458
Scrofulosis 544
Scrofulous liver 329
Scurvy 123, 540
Seat-worm 304
Sebaceous secretions 629
Seborrhœa 33, 629
Second sound of the heart 204
Secondary fever of small-pox 603
Secondary syphilis 386
Senile respiration 156
Sensibility, increased 484
Sensitiveness, morbid 484
Sensory nerves, affections of 484
Septicæmia 538
Sequelæ of measles 589
Sequelæ of gonorrhœa 382
Sequelæ of typhus 578
Serous pneumonia 173, 189
Ship-fever 569
Shrill scream 24
Shrinking of the brain 20
Skin 606
Skin-diseases, syphilitic 393
Skin, vascular, over the eyeball 50
Skoda 146, 150, 153
Skull, affections of the, without enlargement 29
Skull, atrophy of the 30
Skull, caries of the 30
Skull, inflammation of the 30
Skull, necrosis of the 30
Sick headache 487
Simon 66
Singultus 229
Sinking in of the fontanelle 29
Size of the head 27
Size, normal and abnormal, of the skull 27
Sleepiness 23
Sleeplessness 23
Small-pox 601
Snuffles 70
Softening of the bones 474
Softening of the brain 18
Softening of the spinal marrow 458
Softening of the stomach 255
Soft chancre 385
Soft occiput 29
Sopor 23
Sore mouth of infants 112
Soreness behind the ears 59
Sore throat 109
Spasm 501
Spasm of the masseter 79
Spasmodic diseases 503
Spasms 24
Spasms of the eyeball 52
Spasms of the eyelids 52
Spasms of the face 79, 503
Spasmus facialis 79, 503
Spasmus glottidis 130
Speck-liver 329
Spermatorrhœa 407
Speculum auris 57
Spina bifida 453
Spinal marrow, hardening of the 458
Spinal marrow, softening of the 458
Spine 450
Spleen, acute tumor of the 348
Spleen, anatomical peculiarities of the 345
Spleen, cancer of the 349
Spleen, chronic tumor of the 348
Spleen, echinococcus cysts 350
Spleen, hemorrhagic infarct of the 346
Spleen, hyperæmia of the 348
Spleen, hypertrophy of the 348
Spleen, inflammation of the 346
Spleen, physical examination 344
Spleen, rupture of the 350
Splenitis 346
Spondylarthrocace 484
Spondylocace 484
Spotted fever 13, 454
Squinting 25, 53
Stagnation of blood in the brain 4
Staphyloma corneæ 47
Starting in sleep 24
Stiff neck 464
Stones in the bladder 372
Strabismus 25, 53
Strabismus horridus 53
Stricture of the œsophagus 128
Strictures of the urethra 383
Subcrepitant rattle 154
Sudamina 628
Summer complaint 280
Supplementary respiration 149
Suppression of the foot-sweats 629
Suppression of menses 437
Suppuration of the œsophagus 127
Suppurative fever of small-pox 603
Strophulus 623
Structural changes within the brain 15
Struma 126
Stumbling 26
Stupor 23
St. Vitus' dance 504
Stye, hardened 46
Swamp-miasma 552
Sweat 628
Swelling out of the fontanelle 29
Swellings of the neck 126
Sycosis 389
Syphilis, constitutional 385
Syphilis, constitutional, hints to 398
Syphilis infantum 396

Syphilitic affections of inner organs.... 396
Syphilitic affections of the mucous membranes..... 394
Syphilitic affections of the periosteum, bones and cartilages..... 395
Syphilitic skin-diseases..... 392
Systemic circulation..... 204
Systole..... 204

Tabes dorsalis..... 459
Tænia lata..... 306
Tænia solium..... 306
Taft..... 566
Tape-worm..... 306
Tear-bag, inflammation of the..... 40
Teeth, decaying..... 84
Teeth, development of the..... 84
Teeth, fistula of the..... 83
Teeth, loose..... 84
Telangiectasias.....36, 75, 608
Temperature of the body in health..... 547
Temperature, pathognostic sign of typhoid fever..... 573
Temperature of the sick..... 548
Temperature of the thorax..... 139
Temperature of the tongue..... 101
Tertian fever..... 554
Tertiary syphilis..... 386
Testes, diseases of..... 401
Testicles, inflammation of the..... 402
Tetanus..... 508
Tetanus neonatorum..... 509
Tetter..... 622
Tetter, humid, of the scalp..... 34
Thalamus opticus, frequent seat of hemorrhages in the brain..... 16
Thermometry, clinical..... 547
Thoracic voice..... 158
Thoracic voice changed..... 158
Trachea..... 129
Tracheal respiration..... 129
Thread-worm.....304, 308
Thrombus neonatorum..... 28
Thrush..... 112
Tic douloureux..... 491
Tinea amiantacea..... 613
Tinea capitis..... 34
Tinea decalvans..... 35
Tinea faciei..... 614
Tinea favosa or maligna..... 35
Tinea furfuracea..... 613
Tinkling, metallic..... 155
Tongue..... 100
Tonic spasms..... 24
Tonsils..... 107
Tonsillitis..... 107
Toothache..... 84
Top murmur..... 211
Torpor..... 485
Torticollis rheumatica..... 464
Tottering..... 26
Trembling..... 522
Trembling of the tongue..... 103
Tremor..... 522
Tricocephalus dispar..... 308
Tricuspid valves, defective..... 221
Trismus.....79, 508
Trismus neonatorum..... 509
Trousseau..... 118
Tubercles..... 179
Tubercles in the brain..... 21
Tubercula mucosa..... 389
Tuberculosis of the brain..... 21
Tuberculosis intestinalis..... 302
Tuberculosis of the joints..... 477
Tuberculosis pulmonum..... 178
Tuberculosis of the spinal marrow..... 460
Tubular breathing..... 148
Tumor albus genu..... 479
Tumor, acute, of the spleen..... 348
Tumor, chronic, of the spleen..... 348
Tumors in the brain..... 21
Tumors cystici on the eyelids..... 50
Tumors of the prostata..... 405
Tumors of the spinal marrow..... 460
Tumors of the tongue..... 102
Tussus convulsiva..... 165
Tylosis..... 46
Tympanites..... 317
Tympanitic sound..... 144
Tympanum, inflammation of the..... 59
Typhlitis..... 262
Typhoid fever..... 572
Typhoid intestinal ulcers, slow healing process of the..... 577
Typhoid process upon the mucous membrane of the small intestines..... 572
Typho-malarial fever..... 564
Typhus..... 568
Typhus ambulatorius..... 576
Typhus abdominalis..... 572
Typhus exanthematicus..... 569
Typhus tumultuarius..... 577

Ulcerated sore-throat..... 110
Ulcerations of the œsophagus..... 127
Ulceration of the tonsils..... 108
Ulcers in the fauces..... 110
Ulcers ventriculi perforans..... 244
Uræmia..... 538
Urine, bloody..... 357
Urine, examination of..... 352
Uterine polypi..... 438
Uterus..... 415
Urticaria..... 612
Urticaria febrilis..... 612
Uvula..... 109

Vaccination..... 601
Vagina..... 444
Varicella..... 605
Varicocele..... 403
Variola..... 601
Variolæ asthenicæ..... 603
Variolæ coherentes..... 602
Variolæ confluentes..... 602
Variolæ discretæ..... 602
Variolæ gangrænosæ..... 603
Variolæ hemorrhagicæ..... 603
Variolæ septicæ..... 603
Variolæ typhosæ..... 603
Varioloid.....601, 604
Variolois..... 601
Vascular skin over the eyeball..... 50
Venereal diseases..... 377
Venous murmurs..... 211
Verrucæ vulgares..... 608
Vesicular crepitation..... 152
Vesicular eruption..... 613
Vesicular murmur..... 149

Vesiculæ seminales..... 407
Vibration of voice..... 140
Vicarious menstruation..... 438
Virchow..... 245
Virile power, want of..... 408
Vitiligo..... 608
Vocal fremitus..... 140
Voice, its decrease..... 158
Voice, its increase..... 158
Vomicæ..... 179
Vomiting..... 234
Vomiting, a brain symptom..... 26

Wakefulness..... 23
Walking backward involuntarily..... 26
Walking cases of yellow fever..... 565
Walshe.....153, 154
Warts..... 608
Warts upon the nose..... 67
Water in the brain..... 10
Watery secretion of the skin..... 628
Watery secretion of the skin changed in quality..... 629
Waxy liver..... 329
Wen..... 36
Werlhof's disease..... 542
White softening of the brain..... 18
White swelling..... 477
White swelling of the knee..... 479
Whitlow..... 620
Widening of the œsophagus..... 127
Wilson.....34, 36, 67
Wingskin..... 50
Wintrich.....147, 152, 153, 160
Wolf..... 67
"Wolf"..... 609
Womb, closure of the..... 423
Womb, displacements of the..... 423
Womb, infarct of the..... 419
Worms..... 304
Worms on the external nose..... 66
Writing-spasm..... 504
Wry neck..... 464
Wunderlich.....547, 573

Yellow fever..... 564
Yellow softening of the brain..... 18

Zona..... 611
Zoster..... 611